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ABSTRACT

The 1977-78 Massachusetts statewide assessment of Career and Occupational Development (COD) involved the testing of 2,238 thirteen-year-olds and 2,201 seventeen-year-olds. The assessment design required developmental activities aimed at the production of (1) customized achievement tests referenced to important COD objectives, (2) student questionnaires designed to collect information on individual student and home variables, and (3) principal questionnaires designed to collect information on school-related variables. A panel of educators, school administrators, and business representatives met to evaluate the actual student performance in terms of their own "benchmark" of desirable achievement. Results were compared on each age level and on the COD objectives, which were organized in the following areas: job characteristics; job requirements; career decision making; basic skills; and attitudes and values. Based on these comparisons, the panel felt that more emphasis should be placed on teaching career decision making skills to both age levels and on giving thirteen-year-olds additional instruction in the kinds of abilities, training, and preparation required for various careers. Overall, the panel felt that students at both age levels were receiving sufficient instruction in the other areas. (The first four chapters of this report contain a summary of the design and methodology of the assessment. The remaining seven chapters present a detailed analysis of the assessment results. A number of supporting documents appear in the appendixes, and a companion document--CE 019 016--presents a complete interpretation and summary of the results.) (BM)

ED164869

Massachusetts Statewide Educational Assessment 1977-78

TECHNICAL REPORT

CAREER AND OCCUPATIONAL DEVELOPMENT

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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FOREWORD

Since 1974-75, the Statewide Educational Assessment Program has provided Massachusetts citizens with useful information about the quality of education in Massachusetts. The results of four years of the Assessment Program have informed parents, students, educators, public officials and employers about statewide patterns of student performance in such areas as writing, mathematics, social studies, science, consumer education and career and occupational development.

During 1977-78, 13- and 17-year-old students were assessed, for the second time, in career and occupational development. This report describes the results of this assessment and provides information for the first time on trends in the performance of students in career and occupational development. Readers interested in a detailed interpretation of the assessment findings may obtain a copy of the Summary and Interpretations report by contacting either the Bureau of Research and Assessment or one of the regional offices of the Department of Education.

Also for the first time, that report provides the reader with some interpretations of the meaning and implications of the assessment findings through the concentrated involvement of many educators throughout the Commonwealth. To them, and to the many others whose involvement may not have been explicitly acknowledged, the Board of Education expresses its sincere appreciation.

Finally, it should be pointed out that 31 school systems chose to use the tests and procedures developed for the statewide assessment at the local level. I am pleased to report that, overall, these systems found using this local option highly beneficial.

It is our feeling that this year's assessment reports should find even wider audiences than in the past. I am pleased, therefore, to present this year's Career and Occupational Development assessment findings for review by all interested citizens.

Charles Grigsby
Chairperson
Massachusetts Board of Education

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OVERVIEW

The Massachusetts Statewide Educational Assessment Program is a continuing series of annual evaluations of the knowledge, understanding, skills, and attitudes of Massachusetts public school students. As established by the Massachusetts State Board of Education, the purpose of the statewide assessment is to:

- provide citizens, students, parents, legislators, and educators with useful and accurate information on the quality of education in Massachusetts
- provide state-level decision makers with information necessary for setting educational policy
- help local school systems set their own objectives by providing them with statewide information on patterns of performance and attitudes and strengths and weaknesses of students
- enable local school districts to develop and to implement their own assessment practices by making statewide assessment procedures available to them

Since 1974, Massachusetts statewide assessments have been conducted in reading, mathematics, writing, social studies, citizenship, science, ecology, consumer education, career and occupational education, foreign languages, decision making, and school climate. The 1977-78 assessment marks a second survey of the reading and career/occupational education areas. In future years, repeated assessments will be made in the other learning areas, as well, to examine changes in patterns of student performance.

The 1977-78 assessment was conducted by National Evaluation Systems, Inc. (NES) of Amherst, Massachusetts under contract to the Massachusetts Department of Education (MDE). Personnel from both NES and MDE worked jointly on all aspects of the assessment program. Major project components included the development of the test instruments, administration of the tests, analysis of the data, and dissemination of the results. A total of 2,252 9-year-olds and 2,019 17-year-olds were tested in Reading, while 2,238 13-year-olds and 2,201 17-year-olds were tested in the area of Career and Occupational Development (COD).

In conjunction with the statewide assessment, MDE provided a valuable opportunity to local school districts by offering the state's custom-designed materials for use in comprehensive testing of their own students. Local districts could contract directly with NES to participate in the Local Assessment Option. To preserve the confidentiality of the Local Option, results were reported solely to the individual districts and not to MDE.

This report contains a complete description of the statewide testing program in the area of Career and Occupational Development. The report describes in detail the design and methodology of the program, as well as student achievement data generated by the assessment. This information can serve as a valuable resource to MDE and to others interested in determining the strengths and weaknesses of Massachusetts students. Consideration of these findings may help in the development of educational policy and priorities aimed at improving the education of students throughout Massachusetts.

Outline of This Report

The first four chapters of this report contain a summary of the design and methodology of the assessment. The remaining chapters present a detailed analysis of the assessment results. A number of supporting documents appear in the appendices following the results chapters.

CHAPTER 1

DATA-GATHERING INSTRUMENTS

Introduction

The design of the assessment required extensive developmental activities aimed at the production of (1) customized achievement tests of exercises referenced to important objectives in Career and Occupational Development; (2) student questionnaires designed to collect information on individual student and home variables, and (3) principal questionnaires designed to collect information on school-related variables. These developmental activities were the joint responsibility of MDE, NES, and a COD Technical Committee composed of educators from across the state involved in many aspects and levels of career education.

The Achievement Tests

The first activity of the Technical Committee was the development of appropriate instruments with which to measure student achievement in Career and Occupational Development. As in previous Massachusetts assessments, objective-referenced tests were developed. These are tests designed to measure *what* students know and can do relative to specific types of tasks rather than *compare* students in terms of achievement. Results are reported in terms of the percentage of correct responses rather than in normed scores such as grade equivalents or percentiles.

Because the committee was interested in comparing the achievement of the two age groups, a single test was developed to be administered to both 13- and 17-year-olds. After a careful review of available materials, the committee identified five major objectives and a total of 113 matching test questions for inclusion on the test. A total of 61 of these items had been previously used in the 1974-75 Massachusetts assessment of 17-year-olds. In addition, 28 items were drawn from the materials of the National Assessment of Educational Progress (NAEP). Examination of scores on these items permits comparisons between current and previous Massachusetts performance, and between performance in Massachusetts, the Nation, and the Northeast region. The remaining 24 items were drawn from the NES item bank. A copy of all test items appears in Appendix A.

The Objectives

Each test item was matched to one of the following five COD objectives:

1. Job Characteristics: knowledge of the characteristics (classifications, major duties, nature of tasks, and salary) of various careers and occupations.

2. Job Requirements: knowledge of the abilities, training, and preparation required or useful for various careers and occupations.

3. Career Decision Making: knowledge and ability necessary to plan and implement career decisions.

4. Basic Skills: application of basic skills (numerical, communications, and interpersonal) useful in seeking and retaining employment.

5. Attitudes and Values: personal attitudes and values contributing to career success.

Student and Principal Questionnaires

The purpose of developing student and principal questionnaires was twofold: (1) to identify characteristics of students and their schools that might prove to bear a relationship to achievement and (2) to provide a general characterization of students and schools that, in itself, might prove useful in policy decisions. Questionnaires, which were designed by the Technical Committee, were administered to all participating students and to principals of all schools enrolling these students.

Student questionnaires. The student questionnaire itself was limited in length by the allotted administration time in the schools. NES worked with MDE and the committee to develop questionnaire items. The result was the selection of 27 items for 13-year-olds and 31 items for 17-year-olds including questions asking students about their gender, grade, spare-time and homework activities, career counseling experiences, parents' jobs, and their own aspirations for future schooling and career. A copy of each student questionnaire appears in Appendix B.

The questionnaires were printed on the first seven pages of the response booklet. In order to increase the reliability of the questionnaire information to the greatest extent possible, a test administrator read the student questionnaire aloud and assisted students in answering the questions wherever necessary. "Stop" instructions separated the questionnaire from the test items in the booklet.

Principal questionnaires. The principal questionnaire contained 10 items. The questionnaire elicited principals' perceptions of such things as the emphasis in the school curriculum and level of satisfaction with student achievement on each COD objective, ways in which to improve career education in the school, degree of parental support for the school, and average attendance rates.

A copy of the questionnaire, along with a return envelope, was mailed to the principal of every selected school. About 93% of the principals responded. A copy of each principal questionnaire appears in Appendix C.

CHAPTER 2

SAMPLING DESIGN AND IMPLEMENTATION

Introduction

To increase the reliability of the data collected and to reduce the impact on schools of statewide testing activities, a sampling approach to assessment was adopted. A two-stage stratified cluster design was used to select a random sample of students from the population at each age level. The sampling plan for both age groups was based on the actual distribution of eighth- and eleventh-grade populations in the 1975-76 school year. (Since population parameters by age were not available, population by grade was substituted, because most 13-year-olds are in the eighth grade, while most 17-year-olds are in the eleventh grade.)

This section discusses in detail requirements of the sampling design, the general framework of the sampling plan, and the procedures used in determining sample sizes. In addition, it presents the procedures for implementing sampling of schools and students, as well as a description of the numbers of students actually participating in testing activities.

Requirements of the Sampling Design

Several requirements were met by the sampling design:

(1) Each sample is representative of the entire target population in terms of the selected stratification variables (region and kind of community).

(2) The size of each sample drawn is sufficiently large to generalize reliably to the performance of all 13- or 17-year-old Massachusetts students, and to that of students in selected reporting groups.

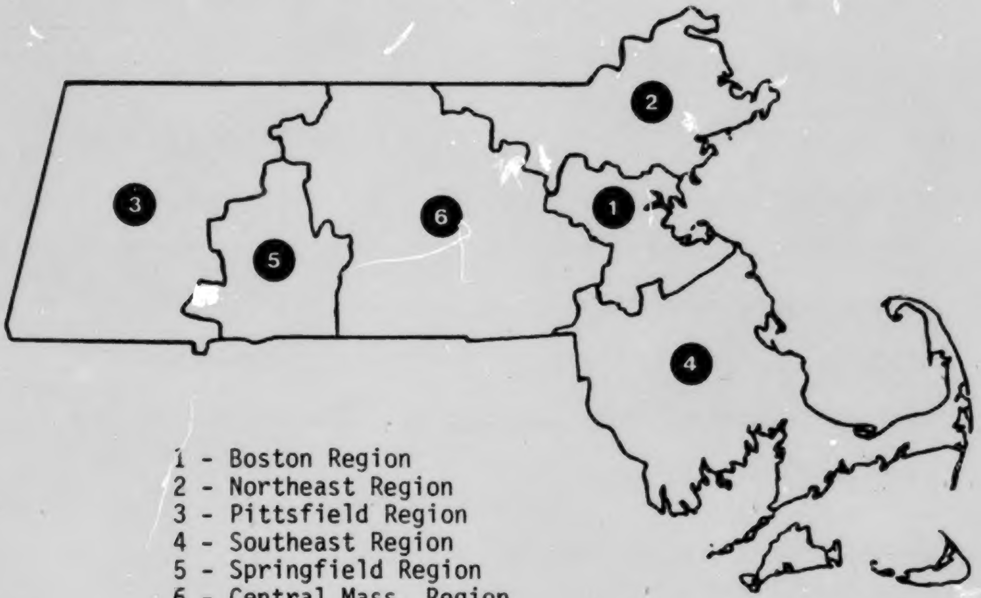
(3) All public schools in Massachusetts containing students of the appropriate age are eligible for selection.

(4) The sample is a probability sample at all stages of the selection process; that is, each eligible school has a chance of being selected proportional to its population, and each student in the state has a positive chance of being chosen. (The limit of two test sessions per school does not permit *equal* probability of selection across students.)

(5) Students are clustered into school buildings and selection of schools occurs before the selection of individual students from within these schools. This requirement increases the efficiency and cost effectiveness of testing.

General Framework of the Sampling Plan

Two stratification variables were selected for the sampling plan: (1) educational region of the state and (2) kind of community. The map below shows the division of the state into regions. Each region is identified in the key below the map. The names assigned to each region are for identification purposes only; each region is comprised of a larger area than might be suggested by its name alone. For example, the Boston Region contains a number of communities outside the Greater Boston area.



1 - Boston Region
2 - Northeast Region
3 - Pittsfield Region
4 - Southeast Region
5 - Springfield Region
6 - Central Mass. Region

The four kinds of community (KOC) were defined as follows:

- Big Cities: communities designated as central cities according to the 1970 United States Census. Examples include Boston, Brockton, Haverhill, Holyoke, Lawrence, Worcester.

- Industrial Suburbs: suburbs of central cities with below-average family income ($16,000) and with more than 20% commercial and 7% industrial land use. Examples include Cambridge, Chelsea, Medford, Quincy, Peabody, Waltham, Lee, Monson.

- Residential Suburbs: suburbs of central cities other than Boston with above-average family income, and all nonindustrial suburbs of Boston. Examples include Arlington, Braintree, Framingham, Scituate, Walpole, Andover, Dover, Milton, Newton, Chelmsford, Shrewsbury, Wilbraham.

- Other Communities: resort towns in the Cape Cod and Berkshire areas, nonindustrial suburbs of cities other than Boston with below-average family income, towns with below-average family income, and communities with a population of less than 2,500. Examples include Barnstable, Chatham, Yarmouth, Stockbridge, Bridgewater, Hadley, Oxford, Stoughton, Newburyport, Taunton, Ayer, Kingston, Orange, Webster, Ashfield, Dunstable, Plympton.

According to this stratification plan, schools with similar characteristics could be grouped together and assigned to one of the 24 stratification categories which resulted from a crossing of the two variables. Table 2.1 diagrams the sampling framework. Appendix D contains a listing of all Massachusetts school systems, with their respective region and kind-of-community identifications.

Determining the Sample Size

Introduction. The size of the sample of students to be tested was determined on the basis of (1) the level of precision desired by MDE in making generalizations to the performance of the population as a whole and

TABLE 2.1

Schematic Diagram of Sampling Stratification

DEPARTMENT OF EDUCATION REGION	KIND OF COMMUNITY			
	Big Cities 1	Industrial Suburbs 2	Residential Suburbs 3	Other Communities 4
Boston 1				
Northeast 2				
Pittsfield 3				
Southeast 4				
Springfield 5				
Central Mass. 6				

of the various stratified reporting groups, (2) the size of the total student population, (3) the size of the student population in each stratum, and (4) the size of the student population in each category of the strata.

Sampling precision. Whenever estimates are to be made about a population based on data collected from a sample, those estimates are subject to error. Error is the probable difference between the score of the sample and the true score of the population. Sampling precision refers to the maximum degree of error which will be tolerated in making generalizations. Toleration of a sampling error of .02 (two percentage points), for example, would mean the following: if, in a sample of 17-year-olds, an average of 80% of the items is answered correctly, then the true score of the population probably lies between 78% and 82%.

The above probability statement is made in educational practice at a 95% confidence level. That is, the true score, in the above example, is expected to lie somewhere between 78% and 82% for 95 out of 100 samples; for 5% of the samples, the true score will lie outside this range. This level of confidence is generally considered sufficient for educational research.

The greater the level of precision desired, the greater the number of students that must be tested. A desire for precision must be balanced against potential costs. In general, increasing precision increases the cost—defined in terms of both dollars and time (of students, test administrators, and clerical-administrative personnel). As the sample size is increased, there is a political cost as well, resulting primarily from the increased impact on the activities of participating schools.

Based upon consideration of the foregoing concerns, MDE adopted a level of precision tolerating a 2% (two percentage points) error for the total population. Based on the size of the overall population of students, it was determined that a sample of 2,200 students at each age level would be sufficient for these purposes. Therefore, at least 88 testing sessions with 25 students per session would be required. In order to allow for the inevitable attrition of students from those selected to participate, two steps were taken to increase the chances of obtaining the desired number of students: (1) the number of testing sessions was increased from 88 to 96 at each age level, and (2) from six to 12 alternate students were chosen for each test session to replace any students absent on the testing date.

Size of the student population in each stratum. The strata of interest are regions and kinds of communities. Given the total number of testing sessions, the allocation of testing sessions to strata was made on the basis of the ratio of students in the population of the stratum relative to the total eighth- or eleventh-grade population.

In other words, the 96 testing sessions per age level were assigned to strata proportional to the size of each stratum. Tables 2.2 and 2.3 show, for 13- and 17-year-olds, respectively, the number of test administrations, number of students sampled, and number of students expected to be present to take the test in each of the 10 reporting categories.

Size of the student population in each category of the strata. The number of test administrations in each of the 10 reporting groups shown in Tables 2.2 and 2.3 were maintained and the final allocation of testing

TABLE 2.2

Distribution of 13-Year-Olds Sampled and Expected to Participate, by Stratum

Reporting Category	Number of Test Administrations	Number of 13-Year-Olds	
		Sample	Expected Participation
REGION:			
1: Boston	25	775	573
2: Northeast	20	620	458
3: Pittsfield	8	248	183
4: Southeast	18	558	413
5: Springfield	10	310	229
6: Central Mass.	15	465	344
KIND OF COMMUNITY:			
1: Big Cities	22	682	504
2: Industrial Suburbs	12	372	275
3: Residential Suburbs	36	1116	825
4: Other Communities	26	806	596
TOTAL	96	2976	2200

TABLE 2.3

Distribution of 17-Year-Olds Sampled and
Expected to Participate, by Stratum

Reporting Category	Number of Test Administrations	Number of 17-Year-Olds	
		Sample	Expected Participation
REGION:			
1: Boston	27	999	619
2: Northeast	19	703	435
3: Pittsfield	8	296	183
4: Southeast	17	629	390
5: Springfield	10	370	229
6: Central Mass.	15	555	344
KIND OF COMMUNITY:			
1: Big Cities	21	777	481
2: Industrial Suburbs	12	444	275
3: Residential Suburbs	38	1406	871
4: Other Communities	25	925	573
TOTAL	96	3552	2200

sessions to each category of the strata (i.e., each cell of Table 2.1) was based on the ratio of eighth- or eleventh-graders in the population of the cell relative to the total population in that grade. That is, the proportion of all testing sessions assigned to a particular cell corresponded to the proportion of eighth- or eleventh-graders (relative to the total in-grade population) contained in the cell.

However, due to the need to oversample in cells with an unusually small population, the proportional distribution of testing sessions (and, therefore, sampled students) was not exactly equivalent to population parameters. Sampling weights, ultimately computed on the basis of the actual number of students taking the tests, insure that the average scores for the population and reporting groups are correctly estimated from the sample scores.

Table 2.4 presents the final allocation of testing sessions, for each age level respectively, to the individual categories of the strata, as well as the corresponding population parameters. The top portion of each cell shows the number of students in the category population, while the bottom portion shows the number of test sessions assigned.

Implementation of School Sampling

Step 1. The first step in implementing the sampling design was the construction of a sampling frame—that is, a list of all sampling units (in this case, school buildings) in the population to be sampled. A sampling frame of all eligible schools was constructed based on information

TABLE 2.4

Distribution of Testing Sessions for 13-Year-Olds across Categories of the Strata, with Corresponding Population Parameters

DEPARTMENT OF EDUCATION REGION	KIND OF COMMUNITY				
# of Students in Population # of Test Sessions	Big Cities 1	Industrial Suburbs 2	Residential Suburbs 3	Other Communities 4	TOTALS
Boston 1	5,678 6	7,106 7	13,096 12	0 0	25,880 25
Northeast 2	2,920 3	2,762 2	11,261 11	4,496 4	21,439 20
Pittsfield 3	1,006 2	115 1	217 2	2,745 3	4,083 8
Southeast 4	4,291 4	0 0	4,452 4	10,359 10	19,102 18
Springfield 5	3,726 4	389 1	1,335 2	3,063 3	8,513 10
Central Mass. 6	3,476 3	550 1	5,603 5	6,555 6	16,184 15
TOTALS	21,097 22	10,922 12	35,964 36	27,218 26	95,201 96

TABLE 2.5

Distribution of Testing Sessions for 17-Year-Olds across Categories of the Strata, with Corresponding Population Parameters

# of Students in Population # of Test Sessions	KIND OF COMMUNITY				
DEPARTMENT OF EDUCATION REGION	Big Cities 1	Industrial Suburbs 2	Residential Suburbs 3	Other Communities 4	TOTALS
Boston 1	5,433 6	7,195 7	13,513 14	0 0	26,141 27
Northeast 2	2,406 2	2,509 2	11,006 11	3,854 4	19,775 19
Pittsfield 3	924 2	145 1	263 1	2,577 4	3,909 8
Southeast 4	3,401 4	0 0	3,977 5	8,315 8	15,693 17
Springfield 5	3,638 4	300 1	1,360 2	3,067 3	8,365 10
Central Mass. 6	2,813 3	582 1	5,495 5	6,163 6	15,053 15
TOTALS	18,615 21	10,731 12	35,614 38	23,976 25	88,936 96

provided by MDE. When the information was updated and verified, each school was assigned a region status and a kind-of-community status.

Step 2. Following this assignment, the next step was to divide the sampling frame into separate frames for each stratified category. The frame was broken down into 24 separate lists, one corresponding to each of the 24 categories described in Table 2.1. Schools were listed along with their estimated eighth- or eleventh-grade enrollment and cumulative population totals.

Step 3. The next step was to select the schools from the frame for a *given category*. This selection occurred by using the list of all eligible schools and their cumulative student enrollments. The following procedure was used:

(1) The total student population for the category was noted.

(2) This total was divided by the number of testing sessions assigned to the category, yielding value X.

(3) A random number table was used to select a random number between 1 and X, and the school whose cumulative population interval contained the Xth student was selected.

(4) Value X was added to the random number (and repeatedly to all succeeding values) until the total number of schools required from the category was selected. Each "selection" represented a "test session," and a given school could, therefore, be selected

more than once, depending on the size of its enrollment. A maximum of two testing sessions per school was permitted. After a school had been selected for two testing sessions, it was eliminated from the list.

This procedure, implemented separately for each category, insured that students within a stratum had an equal probability of selection. All estimates of the performance of the population and respective reporting groups were made from properly weighted data.

Implementation of Student Sampling

Introduction. Once the participating schools had been selected, the second stage of the plan was implemented. In the second stage, students were randomly selected from the eligible pool within each selected school. This process was repeated separately for each assigned test session. No stratification variables were employed in the student frame. It was assumed that, given the number of students being sampled, the random selection process would generate an acceptably even distribution of males and females in the total sample for each test.

Eligibility. All students at the appropriate age level were considered eligible for testing *except for* those who were non-English-speaking, or who were handicapped (physically, mentally, or emotionally) in such a way that they could not respond to the test.

Procedure. In order to implement the sampling of students, the principal of each selected school received a letter which indicated the number of testing sessions assigned to the school and requested a roster of the names of all students with the appropriate birthdates. Students born during the calendar year 1964 were considered eligible for the test for 13-year-olds; those born between October 1, 1960 and September 30, 1961 were considered eligible for the test for 17-year-olds.

When 100% of the rosters had been returned and verified, all of the ineligible students were deleted from the pool for each school. Remaining students were numbered sequentially, each student within a school receiving a unique number. Then, using a table of random numbers, 25 students were selected for each testing session assigned to a school. In addition, alternates were randomly selected to replace any students who were absent on the testing date. At the 13-year-old level, six alternates were selected, while at the 17-year-old level 12 alternates were chosen, since attrition rates are known to be higher at the high school level. Because 17-year-olds were tested in two subject areas this year, it was decided that any given student could be required to take only one test. Therefore, once a student was selected for a test session in one subject area, he/she was ineligible for selection in the second area. This constituted selection of students without replacement.

If a given school contained less than 25 eligible students, all eligible students were selected. The alternates for each testing session were kept on file, and the list of selected students was forwarded to the principal. A separate list was provided for each testing session in the school.

Principals reviewed the lists and contacted NES if the names of any ineligible students were included. Where necessary, NES staff provided the names of alternates, assigning them in the order of their random selection. The student samples were then in final form and ready for test administration.

Student Participation in Testing

Table 2.6 provides a summary of the number of students participating in the assessment at each age level. The actual number of participating students may be compared to the number expected to participate, shown in Tables 2.2 and 2.3. At both age levels, the total number of participating students was quite close to the number expected, although the number of participants within each reporting category was sometimes higher or lower than projected.

Additional Vocational Student Sampling at the 17-Year-Old Level

In addition to the students selected as part of the statewide sample, 306 students were tested for a specialized research purpose. The Division of Occupational Education of the MDE requested a comparison of the achievement of students enrolled in vocational programs in regional vocational-technical schools with those enrolled in vocational programs in regular and regional academic high schools. In order to allow for valid comparisons between these two subgroups, additional test administrations were conducted in academic regional and regional vocational schools to increase the sample sizes for these comparisons. Data from students in these "oversampled" schools are not included in the statewide averages presented below.

TABLE 2.6

Number of Participating Students at Each Age Level, by Stratum

Stratum	Number of 13-Year-Olds	Number of 17-Year-Olds
REGION:		
1: Boston	598	563
2: Northeast	444	431
3: Pittsfield	204	208
4: Southeast	385	375
5: Springfield	235	211
6: Central Mass.	372	413
KIND OF COMMUNITY:		
1: Big Cities	450	381
2: Industrial Suburbs	342	289
3: Residential Suburbs	847	943
4: Other Communities	599	588
TOTAL	2238	2201

CHAPTER 3

DATA COLLECTION AND HANDLING

Field Contact

Contact with school and district personnel, initiated in November of 1977, was designed to alert local personnel to the assessment and to provide detailed information on both the statewide and local phases of the assessment. Related activities included substantial contact with school and district personnel, both by mail and by telephone.

NES mailed letters to the superintendents of every Massachusetts school district describing both phases of the assessment, inviting them to participate in the Local Option, and enclosing sample results reports for the Local Option. NES sent follow-up mailings to those districts which did not respond in order to ensure that each district had received the information and had considered Local Option participation. Close contact was maintained throughout the school year with those districts which chose to participate in the Local Option in order to provide direction and assistance as needed.

Following is a brief description of subsequent contact by NES staff with school and district personnel involved *only* in the statewide sample:

(1) Superintendents of all sampled school districts received a letter outlining the schedule of events and listing by name

those schools selected in their districts as well as the number of test administrations (consisting of 25 students per session) needed in each school.

(2) Principals of all selected schools received a letter describing the assessment program, outlining scheduled principal responsibilities, indicating the number of test administrations assigned, and requesting the submission of a roster of all age-eligible students.

(3) A letter providing the names of selected students for each testing session was mailed to all participating principals. The principals were urged to recheck their rosters to insure that no ineligible students were listed.

(4) Test administrators then made telephone calls to all participating principals to schedule the assigned testing sessions. Every effort was made to accommodate the scheduling needs of individual schools.

(5) A letter enclosing the principal questionnaire and requesting its completion was mailed to the principals of all schools containing statewide sample groups. Follow-up letters were sent to principals who did not initially respond.

NES staff made every effort to describe fully the aims and activities of the program, to describe with clarity the responsibilities of school personnel, and to foster cooperation with the program. Throughout the contact period, NES encouraged school personnel to call collect with any questions or concerns relative to the assessment. A copy of the correspondence sent to the participating schools is included in Appendix E.

Test Administration

To limit the burdens placed on school personnel, and to standardize administration procedures for the assessment, 17 persons from Massachusetts with state teaching certificates and backgrounds in education were hired and trained by NES staff to conduct testing in the schools. A test administrators' workshop was conducted by the NES staff at which administrators were thoroughly trained with respect to (1) the research design of the assessment program; (2) school and student selection procedures; (3) test administration; (4) administration of the student questionnaire; (5) classroom procedures (including assembling of students, introducing the test, distribution and collection of materials, and handling of common and unusual situations; (6) special responsibilities (including advance telephone calls to principals to verify appointments; procedures for cancellation, postponement, or rescheduling of testing sessions; and handling of student rosters); and (7) field editing procedures. These responsibilities were described in detail in a test administrators' manual. In addition, test administrators were urged to call collect to NES if any special problems occurred.

Tests were to be administered in the first two weeks of February, 1978 for 13-year-olds, and during the month of March, 1978 for 17-year-olds.

However, severe weather conditions postponed some of the scheduled February testing sessions until early March. The test administration procedures were similar to those used by NAEP but did not include paced audiotapes to accompany the tests. Testing sessions began with a brief explanation of the purpose of the test, followed by the administration of the student questionnaires read aloud to students. When all students had completed the questionnaires, the directions for answering exercises were read aloud, and the students then proceeded to answer the test questions independently.

Following the testing session, test administrators performed a preliminary edit of testing materials and coded each response booklet with a district, school, and student identification number. At the close of each testing period, all materials were returned to NES for final editing, coding, and data processing.

Coding, Scoring, and Data Processing

All test booklets were subjected to an in-house edit at NES, including (1) a check on the coding of student, school, and district identification information; (2) a check on the completeness of the student questionnaire responses; and (3) an edit for stray marks and double responses to the multiple-choice questions.

Following the coding activities, NES staff hand-scored all responses to the open-ended exercises according to scoring guidelines provided by the National Assessment of Educational Progress. Copies of the NAEP scoring criteria for each open-ended item appear in Appendix H of this report. The responses for each student were then keypunched and verified at the NES offices, and the cards were listed on a data tape for each age level.

The data tape for each age level contained one record for each student completing the test package. This record included: (1) information given by the student on the student questionnaire; (2) the student's responses to each of the exercises; (3) a numerical identification code which permitted the rematching of each student record to its original test document should that prove necessary; and (4) the responses on the matching school principal questionnaire and stratification information for the student's school.

Prior to data processing, the data tape was scanned for invalid entries and updated where necessary. All response data on the data tape were entered in raw-score form and were converted to the percentage form as needed. Data reduction needs were determined and files were transformed where appropriate, including proper weighting of scores to provide estimates of the population from sample data. All student data (test scores and questionnaire data) were weighted; only principal questionnaire data remained unweighted, since sampling was based on generalizing to students, not schools.

Sampling Weights

In order to analyze the data for reporting purposes, sampling weights were applied to equalize the probabilities of selection in all strata, after attrition. As indicated earlier, the actual numbers of students responding to the tests were to be used in the calculation of sampling weights.

Tables 3.1 and 3.2 present, for 13- and 17-year-olds, respectively, the actual sampling weights applied to the strata on the basis of the participation data presented earlier.

The Local Option

The Local Option phase of the assessment allowed participating districts to examine in detail the achievement of their own students in a single class or throughout the district by contracting directly with NES. Results permitted participating districts to (1) examine students, classes, schools, and the district as a whole; and (2) compare local achievement results with those in Massachusetts, the Nation, and the Northeast region. Materials, as well as regional workshops in test administration and interpretation, were provided by MDE through NES. Districts were required to pay only a per capita cost for test booklet printing and data processing.

The Local Option testing was conducted in the same time period as the statewide sample testing. Overlap of schedules facilitated the organization and execution of testing for both phases and eliminated some activities for those statewide sampled schools that elected to participate in the Local Option.

Thirty-one Massachusetts school systems participated in the Local Option at one or more age levels or subject areas. The following services were provided by NES to those districts participating in the Local Option:

- training of test coordinators or administrators in test administration procedures at one of two regional workshops

TABLE 3.1

Sampling Weights Based on Participation Data for 13-Year-Olds

DEPARTMENT OF EDUCATION REGION	KIND OF COMMUNITY			
	Big Cities 1	Industrial Suburbs 2	Residential Suburbs 3	Other Communities 4
Boston 1	38.63	42.55	46.11	0
Northeast 2	43.58	55.24	44.69	59.95
Pittsfield 3	29.59	4.60	4.34	28.89
Southeast 4	49.32	0	47.87	50.53
Springfield 5	93.15	5.19	29.67	40.84
Central Mass. 6	46.35	22.00	45.55	43.99

TABLE 3.2

Sampling Weights Based on Participation Data for 17-Year-Olds

KIND OF COMMUNITY

DEPARTMENT OF EDUCATION REGION	Big Cities 1	Industrial Suburbs 2	Residential Suburbs 3	Other Communities 4
Boston 1	54.33	49.28	42.63	0
Northeast 2	63.32	35.84	45.29	48.18
Pittsfield 3	19.67	5.60	10.52	23.22
Southeast 4	43.35	0	27.43	53.65
Springfield 5	72.76	12.00	20.61	43.81
Central Mass. 6	39.62	25.30	37.38	35.83

- delivery and pick-up of test booklets
- editing and scoring of tests and data analysis
- complete result reports as described below
- assistance with interpretation of results at one of two regional workshops held after results had been returned to the districts

Two copies of each result report produced by NES were provided. The reports are listed below.

- For each class:
  (1) a Student Objective Achievement Report
  (2) a Class Item Analysis Report
  (3) a Class Objective Summary Report
  (4) a Class Questionnaire Report
- For each school:
  (1) a School Item Analysis Report
  (2) a School Objective Summary Report
  (3) a School Questionnaire Report
- For the school system:
  (1) a School System Item Analysis Report
  (2) a School System Objective Summary Report
  (3) a School System Questionnaire Report

NES made every effort to ensure that the special needs of individual school districts were met wherever possible. Schools participating in the Local Option may compare their own results with the results for the state and the respective groups as given in this report.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

Goals of Data Analysis

The goals of the data analysis plan developed jointly by staff members of NES and MDE were (1) to describe the achievement of students statewide, (2) to describe the achievement of students in selected reporting groups and to compare their achievement with that of students statewide, (3) to compare the performance of students in the state of Massachusetts with that of the nationwide and Northeast samples tested by the National Assessment of Educational Progress, (4) to compare the performance of students tested in previous Massachusetts assessments to the performance of students tested this year, and (5) to describe selected characteristics of students and schools statewide and in the different regions and kinds of communities.

All goals were accomplished by the selection of appropriate statistical analyses and proper weighting of scores. All achievement scores are reported in terms of the percentage of students responding correctly to a given test item or in terms of the average percentage of a *set* of items answered correctly.

Interpretive Activities

For the first time this year, the Massachusetts assessment included an additional component designed to increase the usefulness of the results.

This phase focused on generating interpretations and recommendations based on professional judgment of the assessment results. Two activities were conducted to assist in the interpretive process.

Benchmark Panel. A group of educators, school administrators, and business representatives from throughout Massachusetts met to discuss the assessment results. Their task was to evaluate the actual performance in terms of their own "benchmark" of desirable achievement. Given the percentage of students answering correctly each test item, the Benchmark Panel attempted to reach a consensus opinion on whether or not additional emphasis ought to be placed on teaching students the skills measured by that item.

Interpretive Workshop. The COD Technical Committee augmented by some additional members met at a two-day workshop to review all of the results of the assessment. Using their professional judgment and the input of the Benchmark Panel, they generated a set of interpretive comments and recommendations for action based on the results.

The results of the Benchmark Panel discussion are summarized in Chapter 11 of this report. Specific discussions and recommendations generated by the expanded Technical Committee are to be found in a separate document entitled "Summary and Interpretations—Career and Occupational Development," available from MDE.

Interpretive Issues

All of the analyses conducted for the objective-referenced assessment involve the computation of the percentage of students answering correctly each individual test item and average percent-correct scores for all items related to an objective or all items on a given test. Additional statistics included for these analyses are standard errors and tests of significance of differences between groups.

The differences presented in this report are those which were statistically significant at the .05 level. This means that a difference of the given magnitude could be expected to occur in repeated samplings only five times in 100 if, in fact, there were no differences between groups. While these results very likely reflect the actual performance differences between groups, they should not be used to infer the causes of these differences. For example, it may be shown that students who plan to attend a four-year college perform above the state average, but this does not imply that this characteristic causes higher performance. The difference, or relationship, may in fact be "caused" by other, perhaps unknown, variables.

The percent correct reported for the state as a whole and for the individual reporting groups are estimates based on probability samples, and, as such, have standard errors associated with them. The reported differences (effects) in performance between a given group and the state average are also estimates and have associated standard errors. The standard error of an effect depends on the size of the two samples, the percent of each group answering the item correctly, and other stratification and clustering effects. Therefore, the magnitudes of the standard errors vary considerably from comparison to comparison. An effect that is twice the size of its associated standard error is considered significant at the .05 level.

It should be noted that some rather large effects are occasionally not statistically significant, while some rather small effects are in some instances significant. This is due to the fact that statistical significance is determined by the ratio of the effect to its standard error. For this reason, the reader should exercise caution in interpreting statistically significant differences. Statistical significance should not be equated with practical importance or educational meaningfulness. Just as acceptable levels of performance must be judged on the basis of educational expectations, the magnitude of differences observed between groups should similarly be judged not only on the basis of statistical significance but also on the basis of educational meaningfulness.

The reader should also be careful not to infer causality from the differences observed between the performance of Massachusetts students and those in the Nation and the Northeast Region. The fact that Massachusetts students surpassed the Nation's or the Northeast Region's students, or failed to perform as well, does not necessarily mean that Massachusetts schools are "causing" the difference in performance. Differences in sample composition (e.g., in age, grade, community characteristics, family background, and personal characteristics) should be considered as bearing a relationship to performance results.

Summary of Interpretive Issues: Focus to the Reader

The achievement scores presented in this report represent best estimates of the "true" achievement scores which would have been obtained had *all* students in the population, rather than a representative sample, been tested. Statistical techniques indicate that these estimates are most likely within two percentage points of the "true" scores of the population. If, for example, the statewide score is shown as 62%, it would be safe to say that the "true" statewide score is between 60% and 64%. The purpose of this reminder is to caution the reader to refrain from over-emphasizing small differences between scores.

In addition, many of the results presented in this report involve comparisons of scores for various purposes. These include comparing Massachusetts scores with nationwide scores, comparing current Massachusetts scores with those achieved in previous assessment years, and comparing scores of various reporting groups within Massachusetts. In each of these cases, the average score of one "group" is compared to that of another "group." Again, because the scores were generated on the basis of a *sample* of students, the score for each group should be considered an *estimate* of the true score of the population that the group represents (e.g., all *public school* eleventh-graders).

The reader should note that the tables in this chapter indicate those differences in scores that are statistically significant at the .05 level. However, statistical significance is not to be equated with educational meaningfulness. Small differences between groups may be *statistically significant* in one case and not in another due to a variety of factors, but, even where statistically significant, differences may be too small to be educationally meaningful. What is educationally meaningful depends on the reader's judgment about the practical implications of given differences in scores.

Particular attention should be paid to the narrative, since it is intended to focus the reader on the most outstanding differences between groups. Where statistical tests have not been performed, the narrative will generally describe scores that vary by 2% or less as "about the same." The reader should bear in mind that such small differences are not likely to be educationally meaningful.

Further, the reader is cautioned to refrain from drawing cause-effect inferences from these data. The differences observed suggest only a *relationship* between a given factor and achievement, *not a causative influence* of the factor on achievement.

CHAPTER 5

ACHIEVEMENT RESULTS FOR ALL MASSACHUSETTS 13- AND 17-YEAR-OLDS

Introduction

The purpose of this chapter is to examine the test performance of Massachusetts 13- and 17-year-olds. The performance of all students in each age group is described for each of the five objectives and for each of the items matched to these objectives.

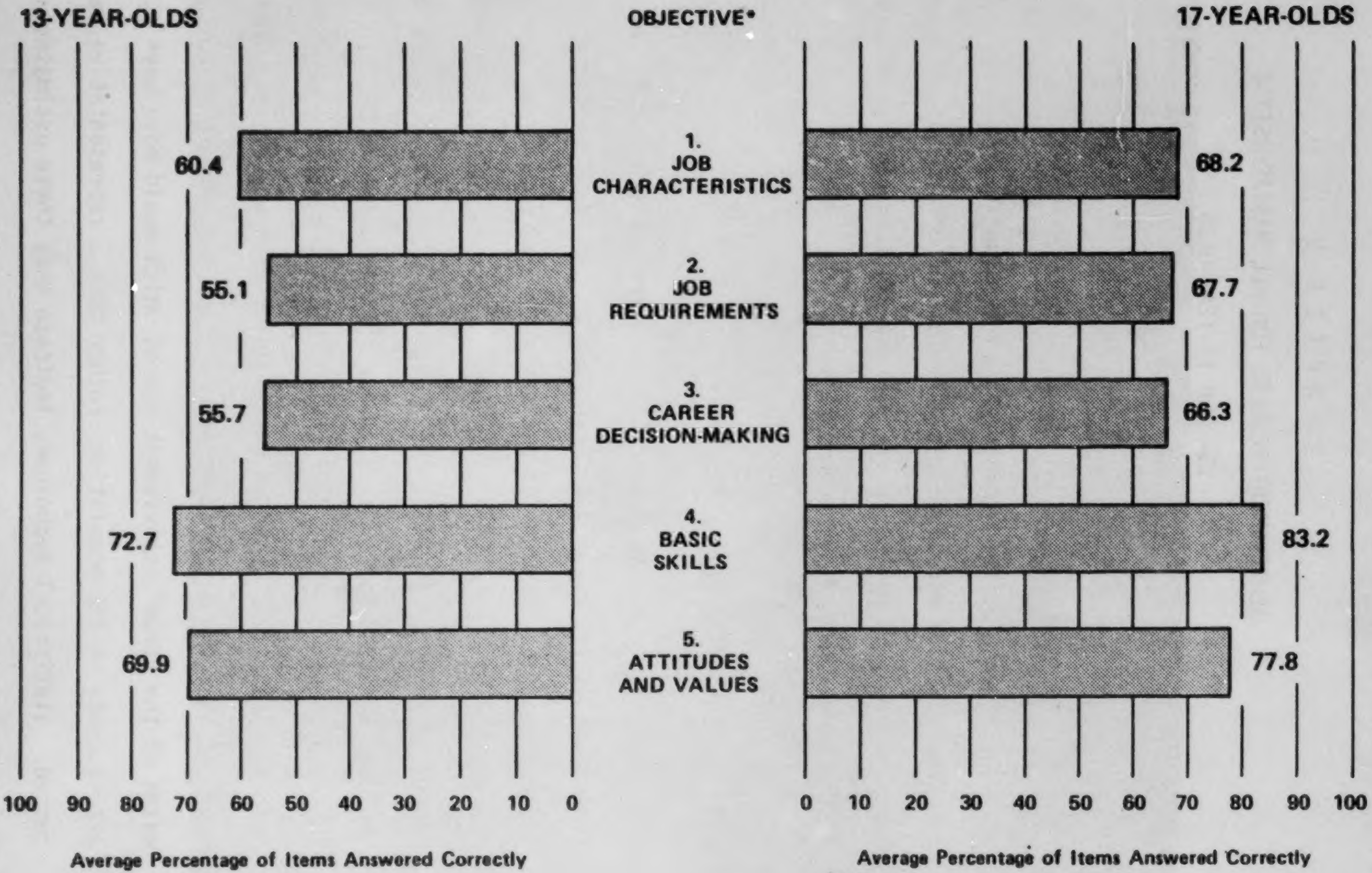
Summary of Results by Objective

Performance on each objective is given in terms of the average percentage of the related test items that the students answered correctly. If, for example, students at a given age level show an average of 68.2% for a particular objective, this means that, on the average, the students correctly answered 68.2% of the items assessing that objective. Performance on the objectives is discussed in the narrative below.

Figure 5.1 displays for each objective the average percentage of matching test items answered correctly by each age group. The reader is reminded that the achievement scores presented here represent best estimates of the "true" achievement scores which would have been obtained had *all* students in the population, rather than a representative sample, been tested. Statistical techniques indicate that these estimates are most

FIGURE 5.1

Achievement of Massachusetts Students by Objective



*The identical test was administered to both age groups.

likely within two percentage points of the "true" scores of the population. If, for example, the statewide score is shown as 62%, one can feel confident that the "true" statewide score is between 60% and 64%. The purpose of this reminder is to caution the reader to refrain from over-emphasizing small differences between scores.

Thirteen-year-olds scored between 55.1% and 72.1% correct across the five objectives. Their lowest performance was on Objective 2, Knowledge of Job Requirements, while their highest performance was on Objective 4, Basic Skills. Scores of 17-year-olds ranged between 66.3% and 83.2% correct, with lowest performance on Objective 3, Career Decision Making, and highest performance on Objective 4, Basic Skills.

On all five objectives, 17-year-olds scored about 10 percentage points higher than 13-year-olds. At both age levels, performance on Objectives 4 and 5 was considerably higher than that on the first three objectives.

Summary of Results on Individual Items

Results on *individual items* are presented below. The following information is provided for each test item:

- the number of the test question as it appeared in the test booklet
- a brief description of the test item
- the percentage of all students in the age group answering correctly

- the percentage answering correctly in each of the Massachusetts reporting groups defined by the variables: sex of student, region, and kind of community

- where the question was tested by NAEP, the percentage of students in the Nation and in the Northeast answering correctly

- where data is available, the percentage of Massachusetts 17-year-olds answering correctly during the 1974-75 assessment

Tables 5.2 and 5.3 present this information for 13- and 17-year-olds, respectively. Because the test was the same for both age levels, the reader can compare the achievement of the two age groups by referring to identical item numbers on the two tables.

The reader interested in a detailed analysis of the test should examine these tables and Appendix A to gain an insight into the nature of the items that were matched to each objective. Appendix A contains copies of all test items, organized by objective. For each test item, the percentage of students selecting each response alternative is shown. By examining this information, the reader can determine not only the percentage of students answering correctly, but also the percentage selecting each of the incorrect responses.

TABLE 5.2

Test Item Performance of Massachusetts 13-Year-Olds by Reporting Group

Item #	Description of Item	Percentage of Students Answering Correctly																
		Massachusetts															NAEP	
		All	Sex		Region						Kind of Community				Nation	Northeast
			M	F	1	2	3	4	5	6	1	2	3	4		
	OBJECTIVE 1															
5*	I operate machine tools, repair metal parts, etc. What am I?	11	13	9	6	14	10	12	13	14	8	8	13	13	3	4
6*	I design buildings and organize construction. What am I?	71	69	74	73	70	75	70	72	70	59	79	75	70	45	53
7*	I receive and pay out money and keep bank records. What am I?	52	54	50	54	52	55	46	49	53	47	50	56	50	51	60
8	Which person usually earns the most money?	56	64	49	56	57	48	58	52	58	55	55	58	55	37	44
9	Which person usually earns the most money?	46	41	51	46	47	48	45	42	48	47	48	45	46	50	54
10	Which of these jobs requires heavy lifting and bending?	82	83	82	80	84	81	83	81	84	78	83	84	83	86	86
14	In which vocational area does a BARBER belong?	44	45	43	49	41	52	39	46	40	49	45	44	38		
15	In which vocational area does an AUTO MECHANIC belong?	70	67	73	66	70	73	69	71	78	70	65	71	73		
16	In which vocational area does a STORE CLERK belong?	91	90	91	90	90	93	91	89	93	87	90	92	91		
17	In which vocational area does a PHYSICAL THERAPIST belong?	87	85	88	86	87	91	86	83	90	83	87	89	86		
18	In which vocational area does a TV REPAIRPERSON belong?	71	68	74	67	73	73	72	72	74	65	69	73	75		
19	In which vocational area does an INSURANCE AGENT belong?	70	71	69	68	68	70	73	67	75	66	66	74	70		

* Open-ended item.

TABLE 5.2 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly																
		Massachusetts															NAEP	
		All	Sex		Region						Kind of Community						Nation	Northeast
			M	F	1	2	3	4	5	6	1	2	3	4				
	OBJECTIVE 1 (continued)																	
20	In which vocational area does a PRINTER belong?	70	68	73	71	66	77	73	67	72	73	71	69	70				
21	In which vocational area does a DENTAL ASSISTANT belong?	79	74	83	80	77	80	78	77	80	76	78	79	80				
22	In which vocational area does a REAL ESTATE BROKER belong?	80	83	77	78	80	82	31	75	82	74	79	81	82				
23	In which vocational area does a NUTRITIONIST belong?	91	90	93	90	92	92	92	91	92	86	91	94	92				
24	In which vocational area does a FURNITURE MAKER belong?	86	86	86	85	84	89	90	86	85	81	86	87	88				
39	Which job requires the least supervision of other workers?	39	37	41	36	40	43	40	43	37	37	41	39	39				
40	Which job requires the most supervision of other workers?	28	34	24	31	30	22	25	23	30	28	26	32	25				
41	Which job would allow the most independence?	23	20	26	23	22	21	23	29	23	31	22	20	23				
56	Which occupation would have the highest salary?	22	25	20	24	24	21	23	14	21	22	18	25	20				
	OBJECTIVE 2																	
11	Which one of the following jobs requires good color vision?	87	87	88	87	87	86	88	84	89	81	88	90	88			84	86
12	For which job is good eyesight important?	86	88	84	86	87	83	84	82	88	80	87	90	84			86	90
13	For which job is it important to work fast with your fingers?	92	91	94	92	94	95	93	93	92	90	92	94	93			94	94
27	What kind of training is needed to be a WAITRESS/WAITER?	79	79	79	79	80	86	76	83	78	76	77	83	79				
28	What kind of training is needed to be a GLASS BLOWER?	51	49	52	51	53	51	46	54	51	38	51	56	52				

TABLE 5.2 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly														
		Massachusetts													NAEP	
		All	Sex		Region						Kind of Community				Nation	Northeast
			M	F	1	2	3	4	5	6	1	2	3	4		
	OBJECTIVE 2 (continued)															
29	What kind of training is needed to be a HOSPITAL ATTENDANT?	11	12	10	13	11	9	10	9	12	12	14	11	8		
30	What kind of training is needed to be a SOCIAL WORKER?	53	49	56	56	52	53	51	53	51	51	58	54	50		
31	What kind of training is needed to be a REFRIGERATION MECHANIC?	66	68	65	65	69	60	71	54	68	57	69	69	67		
32	What kind of training is needed to be a BLACKSMITH?	59	57	60	63	54	56	59	59	58	49	59	64	58		
33	What kind of training is needed to be a PHARMACIST?	66	69	63	62	66	65	69	67	65	57	67	68	67		
34	What kind of training is needed to be an AUTOMOBILE SALESMAN?	43	42	44	46	44	44	39	42	41	36	47	47	39		
35	What kind of training is needed to be an ENGINEER?	44	43	45	42	43	52	41	49	48	42	43	46	44		
36	Which job requires the longest period of training?	53	52	54	56	58	41	48	46	53	46	54	60	47		
37	Which job requires the longest period of training?	64	59	69	69	71	57	59	59	59	59	67	71	56		
38	Which job requires the longest period of training?	48	41	54	48	51	48	48	46	45	40	46	52	49		
42	A RADIO ANNOUNCER has which of these eight characteristics?	77	76	78	78	79	82	77	67	76	70	75	85	72		
43	A POLICE OFFICER has which of these eight characteristics?	41	35	45	39	40	43	41	42	43	30	39	46	42		
44	A SECRETARY has which of these eight characteristics?	40	41	39	41	41	38	40	37	39	37	38	43	38		
45	A BUTCHER has which of these eight characteristics?	70	65	74	70	71	72	71	63	70	64	74	72	69		
46	A BUS DRIVER has which of these eight characteristics?	34	33	35	31	34	37	36	36	37	23	36	39	36		

TABLE 5.2 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly														
		Massachusetts													NAEP	
		All	Sex		Region						Kind of Community				Nation	Northeast
			M	F	1	2	3	4	5	6	1	2	3	4		
	OBJECTIVE 2 (continued)															
47	A TV REPAIRMAN has which of these eight characteristics?	40	38	42	40	38	44	41	45	40	34	44	41	40		
48	A RECEPTIONIST has which of these eight characteristics?	26	25	27	25	27	27	25	29	27	20	29	30	24		
49	A DRAFTSPERSON has which of these eight characteristics?	26	25	27	28	28	24	24	19	27	24	25	29	23		
54	The program described will prepare John to be:	26	26	25	28	29	19	24	20	23	24	24	30	20		
55	To prepare for being a police officer, Sue should:	73	68	76	72	72	77	73	68	75	65	73	78	70		
84	What level of math does being a SALES CLERK require?	79	82	77	79	78	86	78	80	80	71	77	83	80		
85	What level of math does being an ELECTRICIAN require?	37	38	36	38	39	31	37	35	35	38	36	39	33		
86	What level of math does being an ENGINEER require?	68	69	67	65	66	70	69	70	73	60	68	73	67		
87	What level of math does being a BANK TELLER require?	48	50	47	48	44	52	51	48	50	46	41	52	48		
88	What level of math does being a METEOROLOGIST require?	70	73	67	71	66	76	73	68	69	63	75	69	74		
	OBJECTIVE 3															
4*	List five things to consider when choosing a career.**	41	41	42	47	40	38	45	23	39	33	40	49	36	59	63
26*	List five ways to learn more about a job before taking it.**	48	42	54	44	53	44	51	42	49	34	46	55	50	32	42
50	Does Diane have enough skill to continue with cabinet making?	42	43	40	44	37	43	43	43	41	36	39	48	39		
51	Should Warren become a merchant seaman?	74	68	79	73	74	81	73	72	76	67	72	78	74		

** Mastery Criteria: Item #4 = 5 of 5 correct; Item #26 = 3 of 5 correct.

TABLE 5.2 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly																
		Massachusetts															NAEP	
		All	Sex		Region						Kind of Community							
			M	F	1	2	3	4	5	6	1	2	3	4			Nation	Northeast
	OBJECTIVE 3 (continued)																	
52	In this situation, what should Elaine do?	37	32	41	34	35	40	36	39	41	29	40	37	41				
53	In this situation, what should Max do?	41	37	45	40	40	45	44	43	40	30	42	46	43				
57	By talking with a qualified person, you could learn about your expected salary. T or F?	78	80	77	78	78	76	78	77	81	75	78	81	77				
58	By talking with a qualified person, you could learn about useful school courses. T or F?	87	84	89	84	87	91	86	91	88	79	89	90	86				
59	By talking with a qualified person, you could learn about necessary skills. T or F?	79	77	81	78	80	84	76	81	82	69	81	85	77				
60	By talking with a qualified person, you would know your future co-workers. T or F?	69	65	72	67	68	77	69	72	70	61	70	71	72				
61	By talking with a qualified person, you could learn about advancement chances. T or F?	70	69	70	68	69	69	70	69	73	64	69	72	71				
75	Which is an Equal Opportunity Employer not expected to do?	62	57	66	59	64	63	57	62	68	53	69	64	62				
76	All of the following are fringe benefits except:	50	55	47	52	49	54	49	47	53	42	54	54	50				
77	Which one of the following is a Social Security benefit?	74	75	73	76	74	75	71	73	75	67	76	78	72				
94	Risa's career plans might include such jobs as:	36	38	35	32	32	44	41	37	42	32	32	39	38				
95	Linda's career plans might include such jobs as:	59	57	61	57	61	58	58	57	62	48	58	65	60				
96	Fred's career plans might include such jobs as:	35	34	36	36	35	36	34	31	35	37	39	33	34				

TABLE 5.2 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly														
		Massachusetts													NAEP	
		All	Sex		Region						Kind of Community				Nation	Northeast
			M	F	1	2	3	4	5	6	1	2	3	4		
	OBJECTIVE 3 (continued)															
97	Which job matches Karen's interests and abilities?	29	30	27	30	29	22	27	28	30	22	28	33	27		
98	Tom's post-high-school plans should include:	35	37	34	34	33	39	38	31	37	29	36	38	36		
99	In 10 years, will we need more or fewer MATHEMATICIANS?	53	53	53	51	54	57	55	52	53	54	49	55	52		
100	In 10 years, will we need more or fewer FORESTERS?	46	48	44	43	44	53	46	52	50	39	51	45	50		
101	In 10 years, will we need more or fewer BUSINESS MACHINE REPAIRPERSONS?	67	67	68	67	66	65	72	59	69	62	70	70	66		
102	In 10 years, will we need more or fewer ELEMENTARY TEACHERS?	48	45	50	48	50	48	46	47	48	41	53	51	46		
103	In 10 years, will we need more or fewer COMPUTER PROGRAMMERS?	74	76	72	73	68	79	79	72	77	64	72	77	79		
104	In 10 years, will we need more or fewer LAB TECHNICIANS?	70	69	71	67	68	75	71	69	75	62	74	72	72		
105	In 10 years, will we need more or fewer ELECTRICAL ENGINEERS?	69	69	68	69	65	73	71	65	71	60	73	71	69		
106	In 10 years, will we need more or fewer SECRETARIES?	31	30	32	29	32	29	37	25	29	36	27	31	30		
	OBJECTIVE 4															
1	A job resume is:	24	23	24	28	22	24	20	24	23	21	30	27	17		
2	What should you do about the mistakes Ted has made?	76	71	80	75	76	74	76	77	77	68	76	78	78		
3	Whom should you tell about the lack of safety equipment?	66	68	65	65	64	70	67	69	68	65	66	67	66		
66	To have a good job interview, you should be on time. T or F?	89	86	91	86	87	93	91	87	93	85	88	90	91		

TABLE 5.2 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly														
		Massachusetts													NAEP	
		All	Sex		Region						Kind of Community				Nation	Northeast
			M	F	1	2	3	4	5	6	1	2	3	4		
	OBJECTIVE 4 (continued)															
67	To have a good job interview, you should speak only when asked a question. T or F?	56	52	60	58	57	57	57	56	53	48	60	60	56		
68	To have a good job interview, you should answer the questions accurately. T or F?	90	88	92	89	90	95	89	90	90	82	91	94	90		
69	To have a good job interview, you should show interest in the job. T or F?	90	87	93	89	88	91	91	91	93	86	91	92	91		
74	Which question should you ask first during a job interview?	69	61	76	68	71	76	78	66	70	63	68	73	67		
78*	*Bar Graph*: How many trees were planted on Wednesday?	91	91	90	90	93	91	92	92	88	85	90	94	91	95	97
79*	*Bar Graph*: How many trees were planted on Thursday?	75	74	76	70	74	78	77	78	78	64	77	80	75	80	83
80*	*Bar Graph*: How many trees were planted on Friday?	21	22	21	20	22	28	20	27	20	15	20	26	20	35	40
81*	According to the blueprint, how long is the office at Side X?	63	68	59	60	64	68	62	65	68	45	61	73	64	59	
82*	According to the blueprint, how long is the office at Side Y?	56	60	53	54	57	64	53	58	60	39	57	65	56	58	
81/ 82*	*Percent of students answering Questions 81 AND 82 correctly.*	49	55	43	46	50	53	46	48	54	31	48	59	48	53	62
83*	According to the blueprint, how many square feet of floor space are there in the office?	23	27	21	23	23	25	20	29	25	12	21	31	23	27	34
89A*	On the envelope, write in the return name.	91	86	95	91	90	94	92	89	92	84	92	93	93	94	93
89B*	On the envelope, write in the return street.	91	87	95	91	90	95	93	90	92	84	93	93	94	92	93

TABLE 5.2 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly														
		Massachusetts													NAEP	
		All	Sex		Region						Kind of Community				Nation	Northeast
			M	F	1	2	3	4	5	6	1	2	3	4		
	OBJECTIVE 4 (continued)															
89C*	On the envelope, write in the return city, state, and zip.	91	87	95	91	90	95	93	89	93	84	93	93	94	92	92
89D*	On the envelope, write in the addressee's name.	94	90	98	93	93	97	96	91	95	87	95	96	96	95	95
89E*	On the envelope, write in the addressee's street.	94	90	98	94	93	97	96	89	96	88	94	96	96	93	95
89F*	On the envelope, write in the addressee's city, state, and zip.	94	90	97	93	93	96	96	89	96	88	94	96	95	93	93
89G*	*Percent of students completing entire envelope correctly.*	89	83	95	89	88	94	90	85	91	81	91	91	92		
90	According to the table, what size socks should you buy if you wear Size 10 shoes?	79	76	81	77	79	80	77	77	82	65	81	85	79	67	70
92	In a phone book, "Jones" would be found between which 2 names?	78	75	80	77	77	81	80	73	79	71	77	82	77		
93	Which would be least worthwhile to discuss at the meeting?	53	51	55	49	54	53	52	50	61	38	48	62	55		
	OBJECTIVE 5															
25	Whose fault was it that Mary did not buy the bread?	30	33	28	29	36	23	29	30	27	22	34	35	26	23	23
62	To be a success, should a nurse get along well with others?	72	71	73	70	71	78	72	73	75	70	71	72	74		
63	To be a success, should a nurse sacrifice speed for accuracy?	84	80	87	82	84	87	84	84	84	74	84	87	86		
64	To be a success, should a nurse change jobs yearly?	89	86	92	88	89	91	90	90	89	83	88	91	90		
65	To be a success, should a nurse offer new ideas?	51	54	49	53	52	51	46	55	52	53	49	53	49		

TABLE 5.2 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly														
		Massachusetts													NAEP	
		All	Sex		Region						Kind of Community				Nation	Northeast
			M	F	1	2	3	4	5	6	1	2	3	4		
	OBJECTIVE 5 (continued)															
70	To become an accountant, should Lynn enroll in a college math course?	77	76	78	79	75	82	76	80	77	69	78	81	78		
71	To become an accountant, should Lynn express new ideas about her bookkeeping job?	63	61	64	57	62	70	64	67	78	61	65	62	64		
72	To become an accountant, should Lynn make decisions without consulting her boss?	76	73	79	76	73	82	77	79	76	72	79	78	75		
73	To become an accountant, should Lynn be dependable and enthusiastic about her job?	89	86	91	87	88	93	90	86	93	81	88	91	92		
91	In these circumstances, are you responsible for the injury?	73	71	75	73	73	75	73	73	74	64	72	79	72	72	72
107	Is it important for success to always try to improve things?	90	90	90	88	89	93	90	86	93	81	90	94	90		
108	Is it important for success to keep your mouth shut and not stir things up?	49	48	49	48	51	54	47	47	48	40	46	53	49		
109	Is it important for success to learn to do your job better?	92	90	94	90	92	94	93	90	95	83	94	96	93		
110	Is it important for success to get along well with others?	80	80	80	77	81	83	81	78	83	73	80	83	81		
111	Is it important for success to keep quiet about your mistakes?	75	72	77	75	72	76	75	69	79	62	74	81	76		
112	Is it important for success to do work you can be proud of?	80	79	81	79	78	80	84	77	80	75	79	84	78		
113	Is it important for success to do only what you are told?	20	19	20	21	21	18	17	18	19	15	18	26	15		

TABLE 5.3

Test Item Performance of Massachusetts 17-Year-Olds by Reporting Group

Item #	Description of Item	Percentage of Students Answering Correctly															
		Massachusetts													NAEP		MA 1974-75
		All	Sex		Region						Kind of Community				Nation	Northeast	
			M	F	1	2	3	4	5	6	1	2	3	4			
	OBJECTIVE 1																
5*	I operate machine tools, repair metal parts, etc. What am I?	26	37	16	20	33	35	25	29	26	26	36	22	29	19	21	
6*	I design buildings and organize construction. What am I?	80	75	85	78	86	79	77	81	79	75	69	86	79	68	72	
7*	I receive and pay out money and keep bank records. What am I?	68	66	70	65	70	72	67	73	69	67	66	68	69	79	81	
8	Which person usually earns the most money?	81	86	76	79	85	83	82	83	78	75	87	82	80	67	75	
9	Which person usually earns the most money?	58	49	67	53	60	56	64	56	63	50	57	60	62	70	72	
10	Which of these jobs requires heavy lifting and bending?	87	87	87	84	91	89	88	88	86	84	85	89	87	90	91	
14	In which vocational area does a BARBER belong?	49	49	49	53	47	51	43	57	47	50	47	52	45			46
15	In which vocational area does an AUTO MECHANIC belong?	75	71	79	73	77	78	75	75	76	73	70	76	77			87
16	In which vocational area does a STORE CLERK belong?	94	92	96	92	95	90	96	96	94	89	95	95	95			95
17	In which vocational area does a PHYSICAL THERAPIST belong?	87	87	87	88	87	81	85	90	86	84	86	88	87			72
18	In which vocational area does a TV REPAIRPERSON belong?	78	75	80	77	79	77	77	80	78	74	73	79	80			83
19	In which vocational area does an INSURANCE AGENT belong?	81	80	81	76	85	88	81	85	79	72	75	84	83			77

* Open-ended item.

TABLE 5.3 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly															
		Massachusetts													NAEP		MA 1974-75
		All	Sex		Region						Kind of Community				Nation	Northeast	
			M	F	1	2	3	4	5	6	1	2	3	4			
	OBJECTIVE 1 (continued)																
20	In which vocational area does a PRINTER belong?	73	73	72	73	72	73	72	71	75	70	74	72	75			54
21	In which vocational area does a DENTAL ASSISTANT belong?	84	83	86	84	85	82	86	88	81	83	83	86	83			66
22	In which vocational area does a REAL ESTATE BROKER belong?	86	86	86	84	89	91	85	89	85	82	84	88	87			78
23	In which vocational area does a NUTRITIONIST belong?	95	94	97	95	95	95	97	94	95	92	96	97	96			88
24	In which vocational area does a FURNITURE MAKER belong?	93	91	94	92	93	95	92	95	94	89	92	95	92			78
39	Which job requires the least supervision of other workers?	51	50	51	47	51	56	49	49	56	44	49	53	51			46
40	Which job requires the most supervision of other workers?	33	41	26	36	36	31	32	32	28	28	35	37	29			30
41	Which job would allow the most independence?	20	18	22	25	17	15	21	17	16	28	26	16	16			26
56	Which occupation would have the highest salary?	35	36	34	36	40	35	29	32	35	29	31	42	30			46
	OBJECTIVE 2																
11	Which one of the following jobs requires good color vision?	92	91	93	90	92	94	93	95	91	86	90	94	93	93	92	
12	For which job is good eyesight important?	94	95	94	94	94	94	94	94	95	89	92	96	95	95	95	
13	For which job is it important to work fast with your fingers?	96	94	97	95	95	96	96	97	98	94	94	97	96	96	96	
27	What kind of training is needed to be a WAITRESS/WAITER?	91	90	93	90	91	90	90	93	94	81	93	94	91			93
28	What kind of training is needed to be a GLASS BLOWER?	62	60	64	60	63	63	59	75	62	53	55	68	62			61

TABLE 5.3 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly															
		Massachusetts													NAEP		MA 1974-75
		All	Sex		Region						Kind of Community				Nation	Northeast	
			M	F	1	2	3	4	5	6	1	2	3	4			
	OBJECTIVE 2 (continued)																
29	What kind of training is needed to be a HOSPITAL ATTENDANT?	23	22	24	26	22	21	25	21	19	21	31	22	21			26
30	What kind of training is needed to be a SOCIAL WORKER?	70	63	78	74	71	64	70	63	69	66	66	76	66			41
31	What kind of training is needed to be a REFRIGERATION MECHANIC?	81	82	79	78	86	76	83	74	80	69	84	84	80			62
32	What kind of training is needed to be a BLACKSMITH?	71	67	74	71	72	69	64	80	70	59	60	78	70			67
33	What kind of training is needed to be a PHARMACIST?	87	88	87	85	90	91	87	86	90	81	90	89	88			79
34	What kind of training is needed to be an AUTOMOBILE SALESMAN?	52	54	50	48	55	52	54	52	51	49	56	51	52			50
35	What kind of training is needed to be an ENGINEER?	59	62	57	58	63	66	55	62	57	53	51	66	57			64
36	Which job requires the longest period of training?	75	73	78	75	78	72	74	72	76	65	75	80	73	64	70	
37	Which job requires the longest period of training?	79	76	82	82	81	69	76	74	81	66	76	85	79	81	83	
38	Which job requires the longest period of training?	62	53	71	60	63	64	63	59	64	53	53	66	65	59	63	
42	A RADIO ANNOUNCER has which of these eight characteristics?	89	88	89	85	92	92	88	88	89	78	86	93	88			90
43	A POLICE OFFICER has which of these eight characteristics?	63	56	69	57	65	68	66	66	62	53	58	66	66			68
44	A SECRETARY has which of these eight characteristics?	37	40	34	35	41	46	35	40	33	38	36	37	36			46
45	A BUTCHER has which of these eight characteristics?	78	75	81	72	81	83	80	84	78	70	70	82	81			80
46	A BUS DRIVER has which of these eight characteristics?	58	55	61	52	63	62	59	63	56	44	55	63	59			60

TABLE 5.3 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly															
		Massachusetts													NAEP		MA 1974-75
		All	Sex		Region						Kind of Community				Nation	Northeast	
			M	F	1	2	3	4	5	6	1	2	3	4			
	OBJECTIVE 2 (continued)																
47	A TV REPAIRMAN has which of these eight characteristics?	43	42	44	40	47	56	41	47	41	35	40	46	47			46
48	A RECEPTIONIST has which of these eight characteristics?	48	47	50	43	53	52	48	54	48	36	40	55	49			49
49	A DRAFTSPERSON has which of these eight characteristics?	37	34	39	31	40	41	38	41	36	28	32	42	35			36
54	The program described will prepare John to be:	38	36	39	38	40	39	38	33	35	34	37	39	37			44
55	To prepare for being a police officer, Sue should:	81	76	86	75	86	87	84	81	84	73	78	85	83			75
84	What level of math does being a SALES CLERK require?	91	89	94	90	90	96	90	93	94	81	91	96	90			92
85	What level of math does being an ELECTRICIAN require?	37	47	27	40	40	31	35	37	31	31	43	39	34			34
86	What level of math does being an ENGINEER require?	90	89	90	89	91	93	88	92	90	78	89	95	88			92
87	What level of math does being a BANK TELLER require?	69	66	72	67	74	71	68	71	68	62	66	75	67			74
88	What level of math does being a METEOROLOGIST require?	78	78	79	77	79	75	80	76	79	76	76	78	80			74
	OBJECTIVE 3																
4*	List five things to consider when choosing a career.**	63	63	64	64	63	67	64	52	68	47	57	72	63	85	87	
26*	List five ways to learn more about a job before taking it.**	65	60	70	60	66	72	67	64	70	50	55	73	67	56	59	
50	Does Diane have enough skill to continue with cabinet making?	58	58	58	54	61	70	57	62	57	48	50	64	57			60
51	Should Warren become a merchant seaman?	86	82	90	84	88	85	88	85	87	75	85	91	86			84

** Mastery Criteria: Item #4 = 5 of [illegible] correct; Item #26 = 3 of 5 correct.

TABLE 5.3 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly															
		Massachusetts													NAEP		MA 1974-75
		All	Sex		Region						Kind of Community				Nation	Northeast	
			M	F	1	2	3	4	5	6	1	2	3	4			
	OBJECTIVE 3 (continued)																
52	In this situation, what should Elaine do?	45	41	49	44	42	43	45	50	48	39	47	46	46			40
53	In this situation, what should Max do?	42	43	41	39	43	45	42	44	45	36	37	45	44			41
57	By talking with a qualified person, you could learn about your expected salary. T or F?	86	84	87	85	84	83	88	86	86	82	82	87	86			
58	By talking with a qualified person, you could learn about useful school courses. T or F?	91	88	94	87	92	96	89	93	95	85	87	94	91			
59	By talking with a qualified person, you could learn about necessary skills. T or F?	91	87	94	89	92	93	88	93	92	85	87	93	91			
60	By talking with a qualified person, you would know your future co-workers. T or F?	69	65	73	64	67	69	71	80	71	65	67	70	70			
61	By talking with a qualified person, you could learn about advancement chances. T or F?	81	79	84	81	80	81	83	84	81	78	79	83	82			
75	Which is an Equal Opportunity Employer not expected to do?	77	73	81	74	75	82	77	85	80	65	71	82	79			
76	All of the following are fringe benefits except:	79	81	77	74	83	79	78	83	80	64	76	84	80			
77	Which one of the following is a Social Security benefit?	87	87	88	83	89	87	88	88	91	80	87	89	89			
94	Risa's career plans might include such jobs as:	55	57	54	49	59	65	54	63	56	43	48	62	56			64
95	Linda's career plans might include such jobs as:	72	70	74	65	78	75	70	75	72	58	63	79	72			72
96	Fred's career plans might include such jobs as:	38	37	39	39	38	34	37	38	39	36	40	39	38			43

TABLE 5.3 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly																
		Massachusetts													NAEP		MA 1974-75
		All	Sex		Region						Kind of Community				Nation	Northeast	
			M	F	1	2	3	4	5	6	1	2	3	4			
	OBJECTIVE 3 (continued)																
97	Which job matches Karen's interests and abilities?	41	40	42	39	43	46	39	48	39	30	33	48	40			53
98	Tom's post-high-school plans should include:	53	52	54	49	51	56	51	53	62	44	48	56	55			63
99	In 10 years, will we need more or fewer MATHEMATICIANS?	48	50	46	50	49	51	50	41	46	47	48	49	48			40
100	In 10 years, will we need more or fewer FORESTERS?	48	49	46	46	47	51	49	46	50	39	53	50	45			42
101	In 10 years, will we need more or fewer BUSINESS MACHINE REPAIRPERSONS?	76	75	77	75	77	77	76	75	77	69	74	78	77			72
102	In 10 years, will we need more or fewer ELEMENTARY TEACHERS?	64	61	67	66	67	70	56	57	66	48	61	72	62			40
103	In 10 years, will we need more or fewer COMPUTER PROGRAMMERS?	85	85	86	82	88	85	88	80	89	76	81	89	87			83
104	In 10 years, will we need more or fewer LAB TECHNICIANS?	82	81	82	80	84	85	82	83	82	74	81	84	84			72
105	In 10 years, will we need more or fewer ELECTRICAL ENGINEERS?	78	76	79	72	78	89	84	75	79	70	73	81	80			58
106	In 10 years, will we need more or fewer SECRETARIES?	33	33	33	35	29	30	35	29	32	31	34	33	33			22
	OBJECTIVE 4																
1	A job resume is:	63	58	68	60	65	62	61	61	67	53	53	70	61			
2	What should you do about the mistakes Ted has made?	87	84	89	85	88	90	86	84	88	80	82	91	85			
3	Whom should you tell about the lack of safety equipment?	78	73	82	78	77	80	77	77	78	76	77	78	78			
66	To have a good job interview, you should be on time. T or F?	97	94	99	95	97	98	98	97	98	93	94	99	97			

TABLE 5.3 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly																
		Massachusetts														NAEP		MA 1974-75
		All	Sex		Region						Kind of Community							
			M	F	1	2	3	4	5	6	1	2	3	4		Nation	Northeast	
	OBJECTIVE 4 (continued)																	
67	To have a good job interview, you should speak only when asked a question. T or F?	65	58	72	67	64	67	63	72	61	50	61	71	66				
68	To have a good job interview, you should answer the questions accurately. T or F?	96	94	98	95	95	99	96	97	97	92	94	98	96				
69	To have a good job interview, you should show interest in the job. T or F?	97	95	98	95	97	100	97	98	98	93	96	98	97				
74	Which question should you ask first during a job interview?	85	81	89	81	86	89	85	89	87	75	78	90	85				
78*	*Bar Graph*: How many trees were planted on Wednesday?	94	95	94	93	96	97	94	96	94	89	94	96	95		97	97	
79*	*Bar Graph*: How many trees were planted on Thursday?	81	81	81	77	83	84	82	83	83	69	79	84	85		89	90	
80*	*Bar Graph*: How many trees were planted on Friday?	34	35	33	34	36	34	32	33	36	26	31	38	34		55	52	
81*	According to the blueprint, how long is the office at Side X?	85	90	81	82	88	92	82	88	86	70	85	91	84		88		
82*	According to the blueprint, how long is the office at Side Y?	81	87	75	76	85	87	80	87	80	65	80	87	81		86		
81/ 82*	*Percent of students answering Questions 81 AND 82 correctly.*	77	85	69	73	80	84	74	84	76	61	76	84	76		84	87	
83*	According to the blueprint, how many square feet of floor space are there in the office?	35	41	30	30	39	42	34	39	36	25	24	42	36		49	49	
89A*	On the envelope, write in the return name.	95	94	97	91	97	97	96	98	99	88	93	98	97				
89B*	On the envelope, write in the return street.	96	94	97	92	97	99	96	98	98	88	94	98	98				

TABLE 5.3 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly															
		Massachusetts													NAEP		MA 1974-75
		All	Sex		Region						Kind of Community				Nation	Northeast	
			M	F	1	2	3	4	5	6	1	2	3	4			
	OBJECTIVE 4 (continued)																
89C*	On the envelope, write in the return city, state, and zip.	96	94	97	92	97	98	96	98	99	88	94	98	97			
89D*	On the envelope, write in the addressee's name.	97	96	98	93	98	100	98	98	99	90	96	99	98			
89E*	On the envelope, write in the addressee's street.	97	96	98	94	98	100	98	99	99	91	97	99	98			
89F*	On the envelope, write in the addressee's city, state, and zip.	97	96	98	94	98	100	98	98	98	91	97	99	97			
89G*	*Percent of students completing entire envelope correctly.*	95	93	97	91	97	96	95	97	98	87	93	98	96			
90	According to the table, what size socks should you buy if you wear Size 10 shoes?	91	89	93	86	94	95	91	91	93	78	88	95	92	87	87	
92	In a phone book, "Jones" would be found between which 2 names?	84	82	86	81	86	92	83	91	85	72	83	89	85			
93	Which would be least worthwhile to discuss at the meeting?	69	68	71	63	73	80	69	70	71	54	61	77	69	79	78	
	OBJECTIVE 5																
25	Whose fault was it that Mary did not buy the bread?	42	42	42	43	46	41	39	39	41	34	40	48	37			
62	To be a success, should a nurse get along well with others?	81	77	85	79	81	87	81	85	80	76	78	84	80			
63	To be a success, should a nurse sacrifice speed for accuracy?	88	86	91	87	88	90	89	89	89	83	84	91	89			
64	To be a success, should a nurse change jobs yearly?	92	90	94	91	93	92	92	97	92	88	89	95	92			
65	To be a success, should a nurse offer new ideas?	58	57	58	56	60	48	59	56	59	58	53	59	56			

TABLE 5.3 (continued)

Item #	Description of Item	Percentage of Students Answering Correctly															
		Massachusetts													NAEP		MA 1974-75
		All	Sex		Region						Kind of Community				Nation	Northeast	
			M	F	1	2	3	4	5	6	1	2	3	4			
	OBJECTIVE 5 (continued)																
70	To become an accountant, should Lynn enroll in a college math course?	90	88	91	89	91	93	88	89	91	83	88	93	90			
71	To become an accountant, should Lynn express new ideas about her bookkeeping job?	73	71	74	72	73	70	76	71	74	74	69	75	71			
72	To become an accountant, should Lynn make decisions without consulting her boss?	81	79	83	79	82	80	78	82	83	79	76	84	77			
73	To become an accountant, should Lynn be dependable and enthusiastic about her job?	95	92	97	93	95	96	95	96	95	90	94	97	94			
91	In these circumstances, are you responsible for the injury?	83	82	84	76	85	86	83	87	89	72	79	86	87	83	83	
107	Is it important for success to always try to improve things?	93	94	92	91	93	96	94	93	94	86	90	96	94			93
108	Is it important for success to keep your mouth shut and not stir things up?	56	54	57	55	55	63	56	57	55	43	50	62	56			61
109	Is it important for success to learn to do your job better?	95	94	97	93	96	97	97	96	96	88	93	99	95			97
110	Is it important for success to get along well with others?	91	89	94	87	94	94	92	92	93	85	87	95	91			93
111	Is it important for success to keep quiet about your mistakes?	82	79	85	78	87	86	81	80	85	71	78	89	81			
112	Is it important for success to do work you can be proud of?	90	88	91	86	93	95	92	90	88	82	85	94	90			93
113	Is it important for success to do only what you are told?	36	34	39	38	36	44	35	33	36	30	32	42	33			

CHAPTER 6

COMPARING MASSACHUSETTS WITH THE NATION AND THE NORTHEAST REGION

Introduction

This chapter compares the performance of Massachusetts 13- and 17-year-old students to the performance of students in the Nation and the Northeast Region of the United States on selected items in Career and Occupational Development. Results for students nationwide and in the Northeast were collected by NAEP and include data only for students who were currently enrolled in school.

Comparative results are available only for those items on the test that were developed by NAEP and were administered to the same age levels in both the NAEP and Massachusetts assessments. There were 28 NAEP items on the Massachusetts test, of which NAEP administered 19 to both age levels, six only to 13-year-olds, and three only to 17-year-olds. Results on all individual items for which appropriate NAEP data are available for comparison purposes are presented in Appendix F. Included in that appendix are the appropriate achievement scores (P-values) and their associated standard errors for students in Massachusetts, the Nation, and the Northeast (along with their respective Massachusetts and NAEP item numbers). Statistically significant differences between Massachusetts and NAEP performances are also designated for individual items.

Interpretation of Results

Certain differences existed between the Massachusetts and NAEP assessments that bear on the interpretation of results. First, no paced audiotapes were used for test administration in Massachusetts; NAEP uses paced audiotapes for test directions and for every test item. Further, NAEP tests 13-year-olds in October through December and 17-year-olds in March and April, while Massachusetts tested both ages in February and March. There is no conclusive evidence as to the impact of these differences on achievement.

Summary of Results

Figures 6.1 and 6.2 show the average percentage of NAEP test items answered correctly for each objective by students in Massachusetts, the Nation, and the Northeast at the two respective age levels. The Northeast Region is defined by NAEP as including Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Washington D.C., Pennsylvania, and Maryland.

Comparisons with the Nation. Overall, Massachusetts 13-year-olds outscored their counterparts nationwide by between four and eight percentage points on two of the five objectives, and scored at about the same level on the remaining three objectives. On the other hand, Massachusetts 17-year-olds scored lower than 17-year-olds throughout the Nation by 6% to 9% on two of the objectives, and scored at about the same level on the

FIGURE 6.1

Comparing Massachusetts, the Nation, and the Northeast by Objective—13-Year-Olds

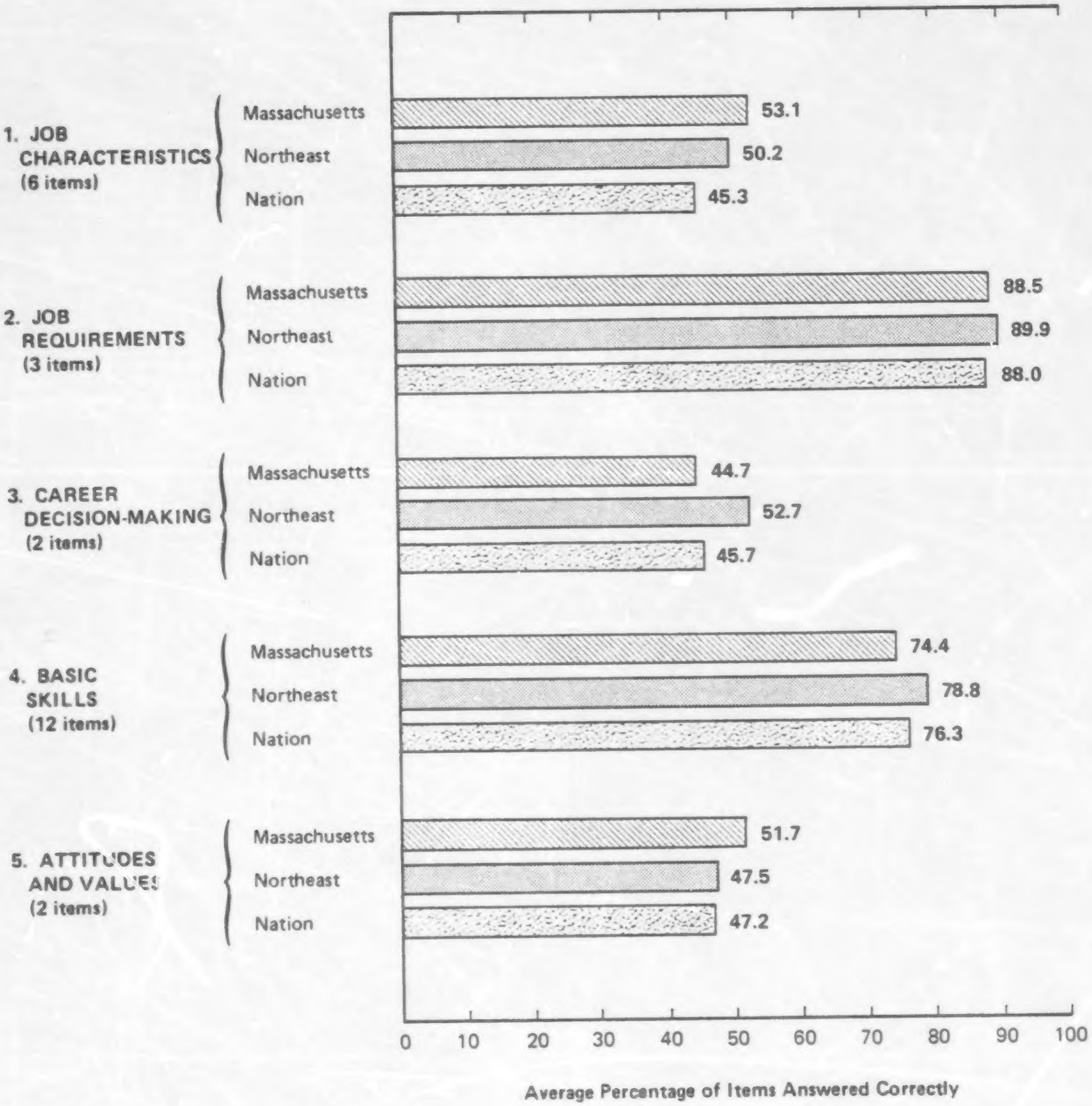
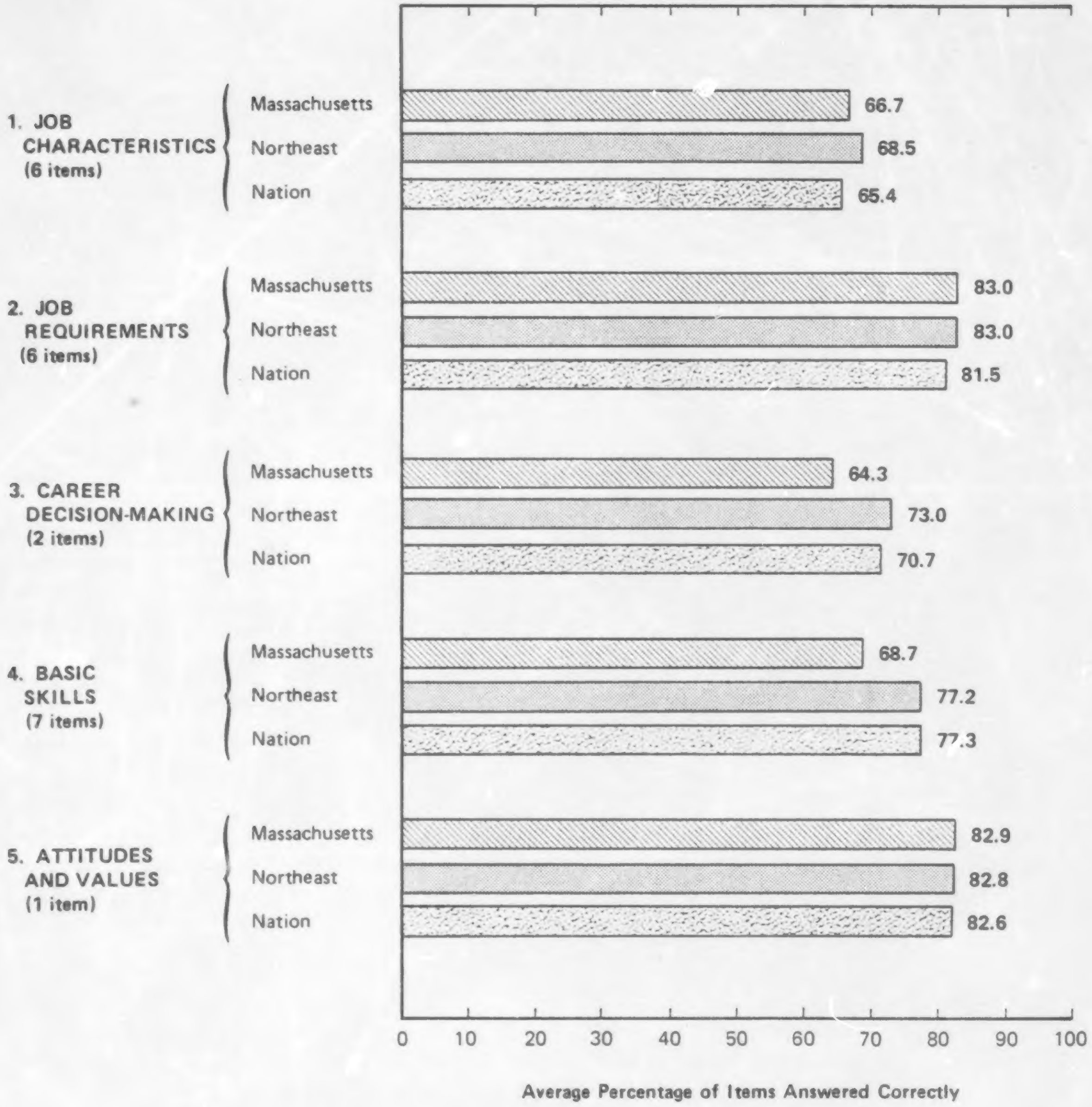


FIGURE 6.2

Comparing Massachusetts, the Nation, and the Northeast by Objective—17-Year-Olds



remaining three objectives. Because only a small number of items are matched to each objective (only one item for Objective 5 was administered to both Massachusetts and NAEP 17-year-olds, for example), the reader is cautioned not to make undue generalizations.

Comparisons with the Northeast. Because the Northeast traditionally outscores the Nation, the scores for students in the Northeast are a better standard against which to judge the performance of Massachusetts students.

Massachusetts 13-year-olds outscored their counterparts in the Northeast by 4% on one objective, scored lower than students in the Northeast by 4% to 8% on two objectives, and scored at about the same level on the remaining two objectives. Seventeen-year-olds in Massachusetts were outscored by those in the Northeast by about 8% on two objectives, and scored at about the same level on the remaining three objectives. The reader is again reminded of the small number of items matched to each objective.

Overview. In general, the relative performance of Massachusetts 13-year-olds was stronger than that of 17-year-olds. In addition, the achievement at both age levels was better in comparison to the Nation than to the Northeast.

CHAPTER 7

YEAR-TO-YEAR COMPARISONS

Introduction

This chapter compares the performance of 17-year-old students this year to the performance of those 17-year-olds who were administered tests in Occupational Attitudes or Occupational Knowledge during the 1974-75 assessment. A total of 61 items in this year's assessment were identical to items on the tests for the previous assessment, and comparisons are available only for these items.

Data Analysis

Table 7.1 presents the average percentage of items answered correctly by Massachusetts 17-year-olds in the two assessment years. Four of the five objectives were matched to items on which year-to-year comparisons can be made. Results are also presented for all communities, regardless of the matching objective. Tests of significance were not performed on these results due to the unavailability of standard errors for the 1974-75 data.

Summary of Results

Students tested this year outperformed those tested in 1974-75 by one to four percentage points on items matched to the first three

TABLE 7.1

Year-to-Year Comparisons by Objective of Items Administered to Massachusetts 17-Year-Olds in Both 1977-78 and 1974-75

Objective	Percentage of Items Answered Correctly	
	1977-78	1974-75
1. JOB CHARACTERISTICS (15 items)	69.0	64.8
2. JOB REQUIREMENTS (24 items)	63.9	62.6
3. CAREER DECISION MAKING (17 items)	59.1	55.8
4. BASIC SKILLS (no common items)	—	—
5. ATTITUDES AND VALUES (5 items)	85.0	87.4
ALL 61 COMMON ITEMS	*65.5*	*63.3*

objectives (Job Characteristics, Job Requirements, and Career Decision Making). On the other hand, students in 1974-75 outscored students tested this year by about 2%, on the average, across the five items matched to Objective 5, Attitudes and Values.

Performance on individual items varied according to item, such that students this year performed above, below, or the same as students in the previous assessment. Results on individual test items may be found in Table 5.3. On the average, however, students scored about two percentage points higher this year than did those in 1974-75. While this difference may be statistically significant, it is probably not large enough to be educationally meaningful, and overall performance should be considered "about the same" in the two years.

Because testing took place earlier in the school year during the 1974-75 assessment (from October through December rather than during February and March), the sample composition for the two assessments was quite different.

At the 17-year-old level, many more of the students were in the twelfth grade during the earlier assessment (83% of the sample in 1974-75 compared to only 26% in 1977-78). In other words, in the 1974-75 assessment the typical 17-year-old student was a twelfth-grader tested early in the school year, while in 1977-78 the typical 17-year-old was an eleventh-grader tested in the middle of the school year. The fact that students this year performed about the same as those tested in 1974-75 is therefore cast in a more favorable light.

CHAPTER 8

ACHIEVEMENT RESULTS FOR REPORTING GROUPS

Introduction

The purpose of this chapter is to relate achievement on the test to various school and student characteristics. To this end, school information was solicited from the principals of each participating school and matched to the scores of students tested within the school. In addition, students were administered a questionnaire which requested information on their demographic characteristics, their experiences with career guidance, the nature of their schoolwork, their perceptions of school, their future plans, and the nature of student-parent interactions. The student and school variables, as well as region and kind of community, represented the pool of potential reporting variables.

The selection of reporting variables from the pool was accomplished on the basis of two criteria: (1) a significant statistical relationship to achievement and (2) meaningfulness and importance to Massachusetts decision makers. A total of 21 variables were selected to define reporting groups. Each selected variable is defined by several reporting categories, and each category represents a group of students.

This chapter examines the test performance of Massachusetts students in each of the reporting groups and compares the performance of each group to that of the population as a whole.

Data Analysis

Achievement, in terms of mean total test scores, of each of the reporting groups is compared to the achievement of all students at the appropriate age level. Mean total test score represents the average percentage of items answered correctly on the entire test (i.e., across all five objectives). This is the most statistically reliable measure for use in these comparisons, since it is derived from the largest number of items (i.e., all items on the test).

The achievement scores of the reporting groups of particular interest are discussed in the narrative below. Appendix G contains complete analyses of *all* reporting groups, not only on the basis of total test score, but also on each of the five objective scores. The percentage of individuals in each reporting group is provided in Chapter 9 (for students) and Chapter 10 (for principals).

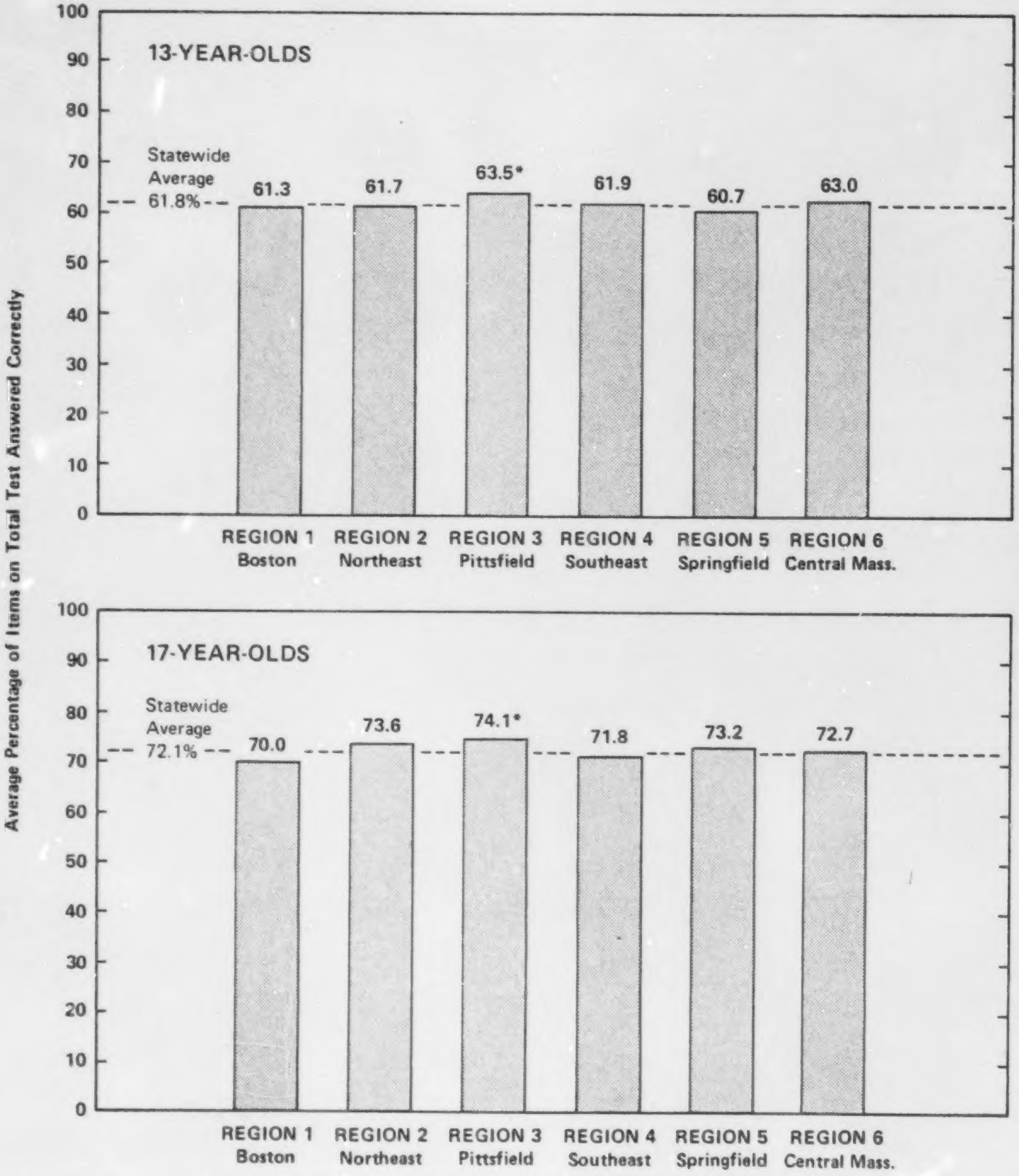
The differences between groups described in this chapter are those that were significant at the .05 level of confidence. The reader is referred to the section on "Interpretive Issues" in Chapter 4 for cautionary statements regarding inferences drawn from these results. While differences between groups may be *statistically significant*, they may be too small to be educationally meaningful. What is educationally meaningful depends on the reader's judgment about the practical implications of given differences in scores.

Results by Region and Kind of Community

Average achievement. Figures 8.1 and 8.2 display *average performance* by region and kind of community, respectively. At both age levels, Big-City

FIGURE 8.1

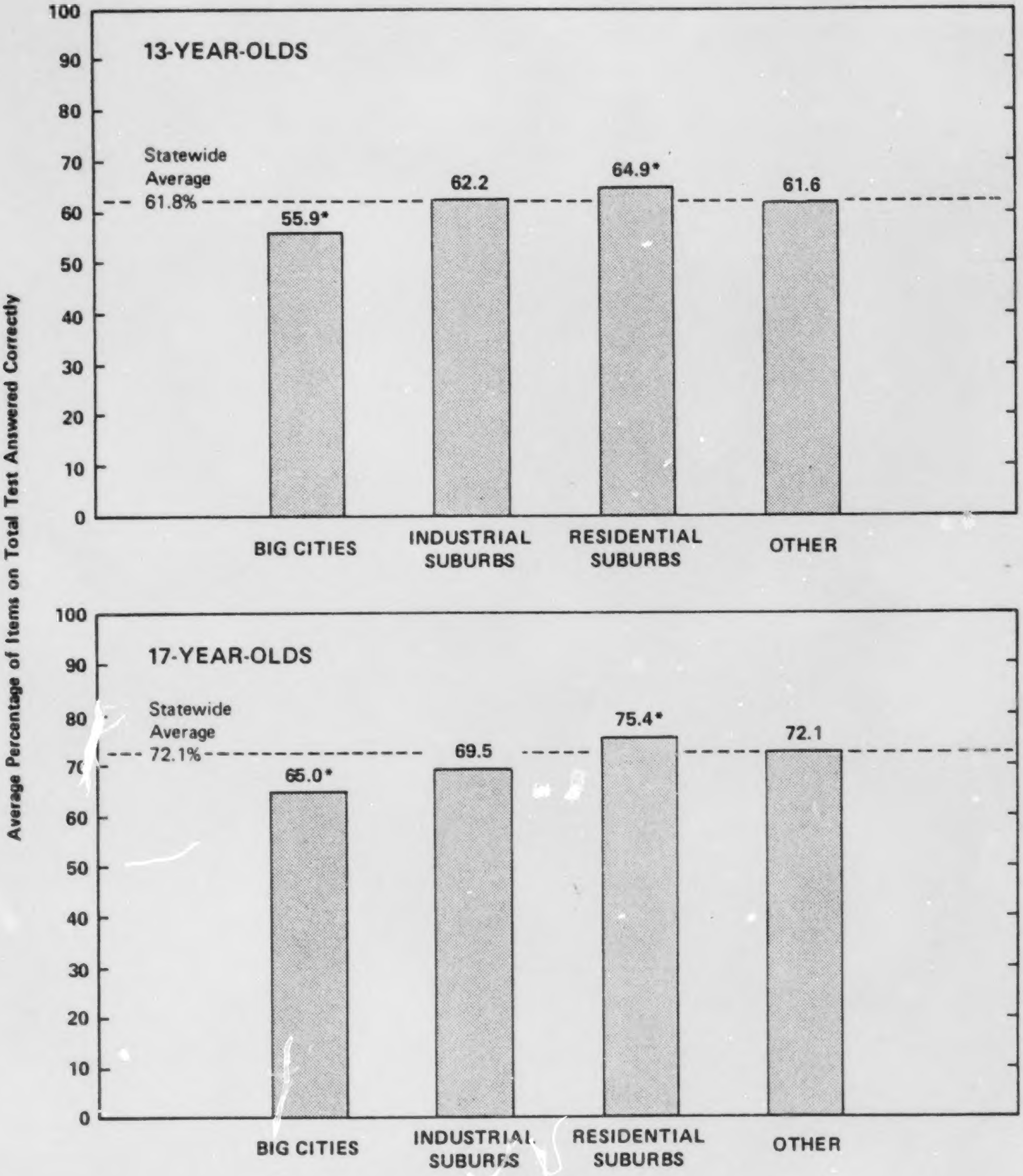
Achievement on Total Test by Region



*represents statistically significant difference between Region and Statewide Average.

FIGURE 8.2

Achievement on Total Test by Kind of Community



*represents statistically significant difference between Kind of Community and Statewide Average.

students performed up to 7% below the statewide average, while students in Residential Suburbs exceeded the statewide average by 3%. The scores of students in Industrial Suburbs and Other places did not differ significantly from statewide scores.

At both age levels, differences between respective regions and the state average were generally very small. The only exception was found in Region 3, the Pittsfield Region, where both 13- and 17-year-olds outperformed students statewide by a small but statistically significant margin. The reader is reminded that each of the regions comprises a fairly large area, as shown on the map on page 7. For example, Region 1 consists of many communities outside of Greater Boston.

Distribution of responses. Tables 8.3 and 8.4 display the *distribution of percent correct* across the state and in each region and kind of community. Examination of Table 8.3 shows that across the state and in each region, over half of the 13-year-olds answered correctly between 61% and 80% of all items on the test. Most of the other students answered correctly between 41% and 60% of the items. Similar results were found across the four kinds of communities, except in Big Cities, where more students' scores fell in the middle range. Very few students in any category answered correctly more than 80% or less than 40% of the items.

Between 62% and 75% of 17-year-olds answered correctly 61-80% of the test items, while 12% to 28% of them answered correctly 81-100% of the items. There were no major differences according to regional or community group.

TABLE 8.3

Distribution of Total Test Score by Reporting Group for Massachusetts 13-Year-Olds

Reporting Groups	Percentage of Students with Achievement Scores in the Following Ranges:				
	0-20%	21-40%	41-60%	61-80%	81-100%
ALL STUDENTS	*0*	*4*	*34*	*60*	*1*
REGION:					
1. Boston	1	6	31	61	2
2. Northeast	1	4	35	59	1
3. Pittsfield	0	2	30	67	1
4. Southeast	0	3	40	56	2
5. Springfield	0	6	35	57	2
6. Central Mass.	0	4	31	64	1
KIND OF COMMUNITY:					
1. Big Cities	1	10	49	39	1
2. Industrial Suburbs	1	3	33	61	2
3. Residential Suburbs	0	2	24	72	2
4. Other Communities	0	4	37	58	1

TABLE 8.4

Distribution of Total Test Score by Reporting Group for Massachusetts 17-Year-Olds

Reporting Groups	Percentage of Students with Achievement Scores in the Following Ranges:				
	0-20%	21-40%	41-60%	61-80%	81-100%
ALL STUDENTS	*0*	*1*	*10*	*69*	*20*
REGION:					
1. Boston	1	3	13	62	21
2. Northeast	0	0	8	67	24
3. Pittsfield	0	0	6	72	23
4. Southeast	0	0	11	72	17
5. Springfield	0	2	8	70	21
6. Central Mass.	0	1	8	75	16
KIND OF COMMUNITY:					
1. Big Cities	2	4	18	64	12
2. Industrial Suburbs	0	1	16	69	14
3. Residential Suburbs	0	0	4	68	28
4. Other Communities	0	0	10	75	15

Profile of Big Cities versus Residential Suburbs. In light of the findings of substantial achievement differences between students in Big Cities and Residential Suburbs, a special profile of the characteristics of students and schools in Big Cities was developed. The reader is directed to Chapter 10, page 113 for a review of this profile which is based on student and principal questionnaire responses.

Results for Additional Reporting Variables

The average performance of each of the additional policy-relevant reporting groups defined by questionnaire responses are presented in Table 8.5.

Sex of student. At both age levels, females performed slightly above the statewide average, while males performed slightly below, with differences not exceeding 2%.

Attitude toward school. There was a general trend at each age level for performance to improve as the student's reported attitude toward school became more positive. Those who "strongly dislike" school performed 5% below the state average.

Discussions about career plans

- Discussions with guidance counselor: At the 17-year-old level only, those students who have discussed career plans with a guidance counselor outperformed those who have not. Further, among

TABLE 8.5

Achievement by Student and Principal Questionnaire Reporting Groups

Reporting Group	Average Percentage of Items on Total Test Answered Correctly	
	13-Year-Olds	17-Year-Olds
ALL STUDENTS	*62*	*72*
SEX:		
Male	61*	71*
Female	63*	73*
HOW DO YOU FEEL ABOUT SCHOOL?		
Strongly dislike	57*	67*
Dislike	59*	70*
OK	61*	70*
Like	64*	75*
Strongly like	61	74
HAVE YOU DISCUSSED CAREER PLANS WITH A GUIDANCE COUNSELOR?		
Yes	61	74*
No	62*	70*
HOW MANY TIMES THIS YEAR HAVE YOU DISCUSSED CAREER PLANS WITH A COUNSELOR?**		
None		69*
Once or twice		73*
Three or more times		75*
Don't know or there is no counselor		65*

* Represents significant difference in score between students who selected this response and statewide average.

** Question not asked of 13-year-olds.

TABLE 8.5 (continued)

Reporting Group	Average Percentage of Items on Total Test Answered Correctly	
	13-Year-Olds	17-Year-Olds
HAVE YOU DISCUSSED CAREER PLANS WITH A PARENT?		
Yes	62*	73*
No	60*	69*
HAVE YOU DISCUSSED CAREER PLANS WITH A FRIEND?		
Yes	62	73*
No	62	69*
HAVE YOU DISCUSSED CAREER PLANS WITH A PERSON IN AN INTERESTING JOB?		
Yes	61*	72
No	63*	72
HAVE YOU DISCUSSED CAREER PLANS WITH A TEACHER?		
Yes	61	74*
No	62	71*
HOW MUCH ARE YOUR PARENTS INVOLVED IN YOUR SCHOOLWORK?		
Hardly at all	59*	71*
Only a little	62	72
Quite a bit	63*	72
A lot	61	73
DO YOU WANT A PROFESSIONAL OR MANAGERIAL TYPE OF JOB?		
Yes	63*	73*
No	60*	70*
I don't know	62	72

* Represents significant difference in score between students who selected this response and statewide average.

TABLE 8.5 (continued)

Reporting Group	Average Percentage of Items on Total Test Answered Correctly	
	13-Year-Olds	17-Year-Olds
DO YOU WANT A JOB AS A SKILLED LABORER OR AS A SALESPERSON?		
Yes	59*	68*
No	63*	74*
I don't know	63	73
DO YOU WANT A JOB WHICH REQUIRES SEMI- OR UNSKILLED LABOR?		
Yes	56*	65*
No	63*	73*
I don't know	60*	69*
HOW MUCH DO YOUR PARENTS WANT YOU TO GO TO SCHOOL OR COLLEGE AFTER HIGH SCHOOL?		
Hardly at all	55*	66*
Only a little	59*	67*
Quite a bit	62	72
A lot	64*	75*
WHAT ARE YOUR PLANS AFTER HIGH SCHOOL?		
Full-time job or armed services	58*	66*
Full-time job and night school	52*	68*
Specialized training (e.g., nursing, technical, or business school)	61	69*
2-year or community college	61	72
4-year college	66*	77*
Haven't decided	59*	68*
HAVE YOU EVER PARTICIPATED IN A WORK-STUDY, FLEXIBLE CAMPUS, SHARED EXPERIENCE, OR STUDENT INTERNSHIP PROGRAM?**		
Yes		69*
No		73*

* Represents significant difference in score between students who selected this response and statewide average.

** Question not asked of 13-year-olds.

TABLE 8.5 (continued)

Reporting Group	Average Percentage of Items on Total Test Answered Correctly	
	13-Year-Olds	17-Year-Olds
IN WHICH TYPE OF PROGRAM OR CURRICULUM ARE YOU NOW ENROLLED?**		
General		69*
Vocational		65*
College-bound		77*
Business or commercial		68*
Don't know		64*
IS YOUR SCHOOL AN ESEA TITLE I SCHOOL?†		
Yes	60*	71
No	63*	73
HOW WOULD YOU RATE PARENTAL SUPPORT OF YOUR SCHOOL'S POLICIES AND PROCEDURES?†		
Excellent	63	74
Good	63*	72
Average	59*	71
Fair	59	71
Poor	50*	67*
HOW WOULD YOU RATE THE ATTITUDES OF YOUR STUDENTS TOWARD SCHOOL AND LEARNING?†		
Excellent	63	74
Good	63*	74*
Average	58*	70
Fair	62	65*
Poor	—	65*

* Represents significant difference in score between students who selected this response and statewide average.

** Question not asked of 13-year-olds.

† Principal questionnaire item.

17-year-olds who have talked to counselors within the past year, performance increased with frequency of such consultations.

- Discussions with parents: Students who reported discussing their career plans with a parent tended to perform higher than those who have not done so. The difference in scores was larger among 17-year-olds (4%) than among 13-year-olds (2%).

- Discussions with friends: Among 17-year-olds only, those who have talked with friends about career plans outperformed those who have not.

- Discussions with a person in a job of interest: At the 13-year-old level only, those who reported that they have talked with a person in a job of interest to them slightly outperformed those who have not.

- Discussions with teachers: Achievement scores were not related to whether or not 13-year-old students reported discussing their career plans with a teacher. Seventeen-year-olds who indicated that they have spoken to a teacher about their future career plans scored slightly higher than the statewide average, while those who reported that they have not had such discussions scored slightly below the state average.

Parental involvement. In both age groups, students who reported that their parents were involved in their schoolwork "hardly at all" scored slightly below the statewide average. The differences, however, were 3% at the 13-year-old level and only 1% at the 17-year-old level.

Future plans

- Career aspirations: At both age levels, the relationship between career aspirations and achievement was the same. Students who indicated that they would like to have a job that could be described as "professional" or "managerial" performed slightly above the statewide average, while those who indicated that they would like to have a middle-level ("sales" or "skilled labor") or low-level ("semi-skilled" or "unskilled") job scored below the statewide average.

- Parental encouragement to continue schooling: At both age levels, there was a strong tendency for performance to improve with the increased emphasis placed by parents on postsecondary education. Students whose parents wanted them to continue schooling after high school "only a little" or "hardly at all" scored below the statewide average by 3-7%, while students whose parents encourage them "a lot" scored higher than the state by 2-3%.

- Post-high-school plans: At both age levels, students who reported that they plan to attend a four-year college scored 4-5% higher than the statewide average, while those who plan on a full-time job or on combining school with a full-time job scored 4-10% lower than students statewide.

Current program enrollment

- Participation in work-study and other programs: Seventeen-year-olds were asked if they had ever participated in a work-study, flexible campus, shared experience, or student internship program. Those who responded "yes" scored below the statewide average by 3%.
- Present high school program: At the 17-year-old level, students who indicated that they were enrolled in a college-bound program scored 5% higher than the statewide average, while students who said they were enrolled in a general, vocational, or business program scored 3-7% lower than the statewide average.

Principal questionnaire variables

- School participation in ESEA Title I program: At the 13-year-old level only, students in schools which receive ESEA Title I funds performed slightly below the statewide average, while those in non-Title I schools scored slightly above the state average. At the 17-year-old level, there was no significant difference between the score of either of these groups and the statewide average.
- Parental support of the school: At both age levels, students whose principals reported that parental support of the school is "average," "fair," or "poor" performed less well than those whose principals reported parental support as "good" or "excellent."
- Student attitude toward school: At the 17-year-old level, students whose principals rated student attitude as generally "fair" or "poor"

scored 7% below the state average, while those students whose principals rated attitudes more favorably tended to perform more highly. Results were not as clear-cut at the 13-year-old level.

Results of Research Analysis of Vocational Students

The Division of Occupational Education of the MDE requested a comparison of the test performance of those 17-year-olds enrolled in vocational programs in regular and regional academic high schools with the performance of 17-year-olds enrolled in vocational programs in regional vocational-technical schools. Additional test administrations were conducted to insure that a sufficient number of students from each category were represented. Including the "oversampled" students and the regular statewide sample, there were a total of 175 vocational students in academic high schools and 398 vocational students in regional vocational-technical schools.

The results are presented in Table 8.6 and are quite straightforward. The average achievement performance on the total test was the same for the two groups. Furthermore, the difference in achievement on each of the five objectives was smaller than 1% in each case.

TABLE 8.6

Comparisons of Test Achievement for Students Enrolled in Vocational Programs in Academic versus Vocational Schools

Objective	Average Percentage of Items on Total Test Answered Correctly	
	Vocational Students in Academic Schools (N = 175)	Vocational Students in Regional Vocational Schools (N = 398)
1. Job Characteristics	65.8	65.9
2. Job Requirements	61.2	61.9
3. Career Decision Making	62.3	61.4
4. Basic Skills	79.5	79.5
5. Attitudes and Values	74.2	73.9
TOTAL TEST	67.8	67.8

CHAPTER 9

RESULTS OF THE STUDENT QUESTIONNAIRE

Introduction

The purpose of this chapter is to summarize the responses of 13- and 17-year-old Massachusetts students to each item on the student questionnaires. The questionnaires for the two age groups appear in Appendix B. They are identical except for four questions which were asked of 17-year-olds but not of 13-year-olds. The purpose of administering these questionnaires was to identify factors about students and their home and school lives that might be related to achievement. Results on the relationships that were observed are presented in Chapter 8.

Summaries of questionnaire responses are provided for all students within each grade and for students in each region and in each kind of community. The data reported are the percentages of students in each group selecting each response to each questionnaire item.

The data summaries are presented for all questionnaire items in Table 9.1 for 13-year-olds, and in Table 9.2 for 17-year-olds. The narrative that accompanies the tables highlights only the most policy-relevant of these results. The narrative is organized by questionnaire item and presents for each one a summary of responses by all students at each age level.

The reader is directed to Chapter 10, page 113 for a profile describing differences between students and schools in Big Cities versus Residential Suburbs.

TABLE 9.1

Crosstabulations of Student Questionnaire Results (13-Year-Olds) by Region and Kind of Community, Reported in Percentages

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
SEX OF THE STUDENT:											
Male	47	47	46	46	45	48	49	45	45	50	45
Female	53	53	54	54	5[illegible]	52	51	55	56	50	55
GRADE OF THE STUDENT:											
6th	1	2	0	0	0	0	0	3	0	0	0
7th	13	13	15	10	12	16	12	17	13	11	14
8th	86	85	85	88	88	83	87	80	86	89	86
9th	0	0	0	2	0	1	0	0	0	0	0
10th	0	0	0	0	0	0	0	0	0	0	0
HOW DO YOU FEEL ABOUT SCHOOL?											
I don't like it	5	6	4	4	6	4	4	4	6	5	5
Mostly, I don't like it	14	17	14	10	15	9	12	13	15	15	14
School is OK	40	38	40	37	41	43	39	41	42	38	39
Mostly, I like it	37	35	38	44	35	41	40	34	34	39	38
I like it a lot	5	5	4	4	4	4	6	8	3	3	4
HOW OFTEN ARE YOU ASSIGNED DRILL WORK?											
Almost every day	53	57	46	51	51	47	61	44	57	59	48
Once or twice a week	34	30	38	41	37	40	27	40	30	29	39
Once or twice a month	13	13	16	8	11	12	12	15	12	12	13
HOW OFTEN ARE YOU ASSIGNED READING HOMEWORK?											
Almost every day	19	22	20	24	19	19	13	20	17	19	21
Once or twice a week	41	42	40	38	40	42	43	40	45	42	38
Once or twice a month	39	35	40	39	40	39	44	39	38	39	41

TABLE 9.1 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
HOW OFTEN ARE YOU ASSIGNED WRITING HOMEWORK?											
Almost every day	4	4	2	3	5	6	2	5	3	2	5
Once or twice a week	23	29	28	14	19	20	15	21	24	26	19
Once or twice a month	73	67	69	82	76	75	83	73	73	71	76
HOW OFTEN ARE YOU ASSIGNED PROJECTS TO DO ON YOUR OWN?											
Almost every day	5	6	7	6	4	4	4	8	4	5	5
Once or twice a week	18	16	20	15	19	19	19	20	18	19	16
Once or twice a month	76	77	73	79	77	77	77	71	78	76	80
HAVE YOU DISCUSSED CAREER PLANS WITH A GUIDANCE COUNSELOR?											
Yes	24	21	23	29	30	26	23	35	22	21	23
No	75	77	77	70	69	74	76	63	77	79	77
HAVE YOU DISCUSSED CAREER PLANS WITH A PARENT?											
Yes	86	85	87	85	86	89	87	85	86	87	87
No	13	14	13	15	14	11	12	13	14	13	13
HAVE YOU DISCUSSED CAREER PLANS WITH A FRIEND?											
Yes	78	78	81	74	75	78	77	77	77	78	79
No	22	21	19	26	24	21	22	21	22	22	21
HAVE YOU DISCUSSED CAREER PLANS WITH A PERSON IN AN INTERESTING JOB?											
Yes	34	34	32	26	36	33	36	41	32	32	33
No	65	64	68	73	63	65	63	56	67	67	67

TABLE 9.1 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
HAVE YOU DISCUSSED CAREER PLANS WITH A TEACHER?											
Yes	15	15	16	13	15	12	15	19	14	13	16
No	84	83	83	86	84	85	84	79	85	86	83
HAVE YOU EVER TAKEN A TEST TO DETERMINE YOUR CAREER PLANS?											
Yes	24	18	25	38	27	21	25	22	21	26	24
No	53	59	52	42	45	56	57	55	55	50	56
I don't know	23	22	23	20	28	22	18	23	24	24	21
DO YOU FEEL THAT FIELD TRIPS TEACH YOU USEFUL THINGS?											
Yes	89	88	90	89	85	87	93	89	88	90	86
No	10	11	10	11	12	12	7	9	11	9	12
Never gone	1	1	1	0	3	2	0	2	1	1	2
HOW USEFUL HAS YOUR SCHOOLING BEEN IN HELPING YOU TO CHOOSE A CAREER?											
Not very useful	16	16	17	12	13	16	17	14	20	15	16
Somewhat useful	52	53	50	55	56	45	51	46	55	53	53
Very useful	23	20	26	25	24	27	22	29	16	23	23
I don't know	9	10	7	8	7	12	10	11	10	9	8
HOW MUCH ARE YOUR PARENTS INVOLVED IN YOUR SCHOOLWORK?											
Hardly at all	11	10	9	12	13	9	15	10	10	10	14
Only a little	28	26	28	28	30	24	29	28	24	29	27
Quite a bit	40	41	42	40	39	37	39	38	43	41	39
A lot	21	23	21	20	18	29	17	23	23	20	20

TABLE 9.1 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
FAMILY OCCUPATIONAL STATUS:											
High	54	55	62	47	46	46	56	46	48	65	46
Medium	27	27	21	30	34	28	26	26	29	23	32
Low	7	5	6	10	8	9	8	10	7	4	9
Unknown	9	10	9	10	8	11	9	12	12	7	9
None	3	3	3	3	5	6	2	7	4	1	4
DO YOU WANT A PROFESSIONAL OR MANAGERIAL TYPE OF JOB?											
Yes	52	56	50	46	52	51	51	53	49	55	49
No	29	27	32	32	31	31	26	34	32	24	32
I don't know	19	17	19	22	17	18	23	13	19	20	20
DO YOU WANT A JOB AS A SKILLED LABORER OR SALESPERSON?											
Yes	30	32	28	29	29	27	36	40	26	28	29
No	52	53	52	48	55	55	45	49	55	51	53
I don't know	18	15	20	24	16	17	19	11	18	21	18
DO YOU WANT A JOB WHICH REQUIRES SEMI- OR UNSKILLED LABOR?											
Yes	11	10	10	13	13	13	11	16	10	7	13
No	78	80	78	74	78	79	76	74	77	82	76
I don't know	11	10	13	14	10	8	13	10	13	11	10
HOW SURE ARE YOU ABOUT THE KIND OF JOB YOU WOULD LIKE TO HAVE?											
Not very sure	22	25	19	28	20	26	20	21	24	22	22
Somewhat sure	46	43	48	46	46	43	50	41	43	49	46
Very sure	32	32	33	27	34	31	30	37	33	29	32

TABLE 9.1 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
TO WHAT EXTENT DO YOUR PARENTS WANT YOU TO GO TO SCHOOL OR COLLEGE AFTER HIGH SCHOOL?											
Hardly at all	7	5	5	9	10	7	7	10	5	4	8
Only a little	13	12	11	10	15	13	14	14	15	9	15
Quite a bit	34	32	35	40	35	33	37	29	34	33	38
A lot	46	51	48	40	41	47	41	46	42	52	39
WHAT ARE YOUR PLANS AFTER HIGH SCHOOL?											
Full-time job or enlist in armed services	9	10	7	8	9	12	9	13	9	6	10
Full-time job and school	3	3	3	3	3	3	2	6	1	2	3
Special training (nursing, technical, business schools, etc.)	13	13	12	10	16	8	14	15	15	10	14
2-year college	3	3	2	6	2	3	4	3	4	3	3
4-year college	41	42	49	34	36	43	35	28	38	52	36
I haven't decided	31	28	28	38	34	31	36	34	34	26	35
HAVE YOU EVER DONE WORK ON A REGULAR BASIS (PART-TIME, SUMMER, OR HOUSEHOLD CHORES)?											
Yes	89	86	91	92	91	91	89	85	89	90	91
No	11	14	9	7	9	9	11	14	11	10	9

TABLE 9.2

Crosstabulations of Student Questionnaire Results (17-Year-Olds) by Region and Kind of Community, Reported in Percentages

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
SEX OF THE STUDENT											
Male	49	52	54	50	42	53	42	49	60	47	47
Female	51	48	46	50	58	46	58	51	40	53	53
GRADE OF THE STUDENT											
9th	2	4	1	0	1	2	0	7	3	0	0
10th	8	11	5	6	8	10	5	17	13	4	6
11th	64	54	72	72	62	64	71	53	63	68	65
12th	27	31	22	22	29	25	24	23	21	28	29
HOW DO YOU FEEL ABOUT SCHOOL?											
I don't like it	6	6	5	5	5	4	9	5	5	6	7
Mostly, I don't like it	10	10	10	7	12	10	10	9	14	10	10
School is OK	34	34	34	31	34	40	31	33	40	33	32
Mostly, I like it	44	44	45	51	41	42	46	45	35	46	45
I like it a lot	6	6	6	5	8	4	5	8	6	4	7
HOW OFTEN ARE YOU ASSIGNED DRILL WORK?											
Almost every day	49	48	47	53	47	47	54	37	33	58	48
Once or twice a week	25	22	29	22	29	24	20	29	25	21	28
Once or twice a month	26	30	23	25	24	28	25	33	41	20	24
HOW OFTEN ARE YOU ASSIGNED READING HOMEWORK?											
Almost every day	43	38	45	48	36	55	46	30	36	49	45
Once or twice a week	37	40	34	37	40	28	40	37	41	37	35
Once or twice a month	20	21	21	15	24	16	13	32	24	14	19

TABLE 9.2 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
HOW OFTEN ARE YOU ASSIGNED WRITING HOMEWORK?											
Almost every day	5	5	6	5	4	6	5	5	4	6	5
Once or twice a week	34	35	36	35	32	41	28	25	30	41	29
Once or twice a month	60	59	58	60	64	52	67	68	66	53	65
HOW OFTEN ARE YOU ASSIGNED PROJECTS TO DO ON YOUR OWN?											
Almost every day	8	8	7	9	5	12	9	9	9	6	10
Once or twice a week	18	17	19	16	20	24	15	20	20	17	19
Once or twice a month	74	74	74	75	76	62	76	71	71	77	72
HAVE YOU DISCUSSED CAREER PLANS WITH A GUIDANCE COUNSELOR?											
Yes	61	59	55	66	64	59	66	50	51	64	67
No	38	38	44	33	36	40	34	45	47	36	33
HOW MANY TIMES IN THE PAST YEAR HAVE YOU DISCUSSED CAREER PLANS WITH A COUNSELOR?											
None	31	33	35	26	31	32	23	38	45	27	25
Once or twice	40	36	42	50	36	43	43	36	34	43	40
Three times or more	27	28	23	23	29	21	31	19	19	28	33
I don't remember or there is no guidance counselor	2	2	1	1	4	3	2	6	2	1	2
HAVE YOU DISCUSSED CAREER PLANS WITH A PARENT?											
Yes	89	87	90	88	92	90	91	86	84	92	90
No	10	11	9	12	8	10	9	11	15	8	9

TABLE 9.2 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
HAVE YOU DISCUSSED CAREER PLANS WITH A FRIEND?											
Yes	85	83	82	85	[illegible]	91	87	82	81	87	86
No	14	14	17	15	13	9	13	14	17	13	13
HAVE YOU DISCUSSED CAREER PLANS WITH A PERSON IN AN INTERESTING JOB?											
Yes	47	51	43	49	50	40	48	46	50	46	50
No	50	45	55	51	49	58	51	47	48	53	50
HAVE YOU DISCUSSED CAREER PLANS WITH A TEACHER?											
Yes	37	38	36	39	41	28	37	36	37	37	38
No	61	58	63	61	58	71	63	58	61	62	61
HAVE YOU EVER TAKEN A TEST TO DETERMINE YOUR CAREER PLANS?											
Yes	51	45	51	57	59	45	53	35	44	56	56
No	37	42	39	30	29	42	37	49	40	35	32
I don't know	12	12	11	13	12	14	11	16	15	9	12
DO YOU FEEL THAT FIELD TRIPS TEACH YOU USEFUL THINGS?											
Yes	85	85	88	84	87	82	86	81	79	89	88
No	10	10	10	11	8	12	10	11	15	8	8
Never gone on one	4	5	2	4	6	6	4	8	7	3	4

TABLE 9.2 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
HOW USEFUL HAS YOUR SCHOOLING BEEN IN HELPING YOU TO CHOOSE A CAREER?											
Not very useful	12	14	10	8	12	13	15	10	11	13	14
Somewhat useful	48	46	48	52	48	51	49	45	48	49	47
Very useful	32	30	34	30	32	31	31	36	32	29	33
I don't know	8	10	7	10	9	5	6	9	8	8	6
HOW MUCH ARE YOUR PARENTS INVOLVED IN YOUR SCHOOLWORK?											
Hardly at all	18	15	17	18	20	24	21	21	16	17	20
Only a little	33	33	30	30	32	35	39	33	32	32	36
Quite a bit	33	34	40	39	32	23	29	32	36	35	31
A lot	15	18	14	13	16	18	12	14	16	17	13
FAMILY OCCUPATIONAL STATUS											
High	54	52	57	53	50	54	56	42	45	62	51
Medium	29	27	27	32	32	31	29	26	32	27	32
Low	7	7	6	7	8	7	6	12	9	4	8
Unknown	7	8	7	3	5	6	6	12	8	5	5
None	4	6	3	4	5	3	2	7	7	2	4
DO YOU WANT A PROFESSIONAL OR MANAGERIAL TYPE OF JOB?											
Yes	55	56	58	56	53	58	53	58	44	59	55
No	28	30	24	28	32	26	29	26	42	24	31
I don't know	16	15	18	15	15	16	18	17	14	18	14
DO YOU WANT A JOB AS A SKILLED LABORER OR SALESPERSON?											
Yes	32	33	30	34	30	36	31	39	46	24	35
No	52	50	53	48	54	51	55	48	43	57	51
I don't know	16	16	17	18	16	13	13	13	12	19	13

TABLE 9.2 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
DO YOU WANT A JOB WHICH REQUIRES SEMI- OR UNSKILLED LABOR?											
Yes	7	6	5	10	10	8	7	10	9	4	10
No	84	85	87	78	81	81	85	78	82	88	81
I don't know	9	9	8	12	9	11	8	12	9	8	9
HOW SURE ARE YOU ABOUT THE KIND OF JOB YOU WOULD LIKE TO HAVE?											
Not very sure	22	21	23	22	21	22	20	22	21	24	17
Somewhat sure	43	43	44	36	41	46	47	41	46	43	44
Very sure	35	36	34	41	38	32	32	38	33	33	39
TO WHAT EXTENT DO YOUR PARENTS WANT YOU TO GO TO SCHOOL OR COLLEGE AFTER HIGH SCHOOL?											
Hardly at all	8	7	8	9	10	9	8	10	15	3	12
Only a little	15	14	13	24	14	17	17	16	23	9	19
Quite a bit	34	33	31	36	35	40	38	34	33	33	37
A lot	42	46	49	30	40	35	37	38	28	54	32
WHAT ARE YOUR PLANS AFTER HIGH SCHOOL?											
Full-time job or enlist in armed services	14	13	11	19	18	15	15	19	21	8	18
Full-time job and school	5	5	5	3	5	7	5	9	5	3	7
Special training (nursing, technical, business schools, etc.)	11	13	9	17	9	13	12	14	17	9	11
2-year college	9	9	6	11	9	11	12	8	9	8	13
4-year college	41	42	51	24	37	37	38	27	25	57	30
Haven't decided	18	16	17	25	21	15	17	22	23	14	19

TABLE 9.2 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
HAVE YOU EVER DONE WORK ON A REGULAR BASIS (PART-TIME, SUMMER, OR HOUSEHOLD CHORES)?											
Yes	94	92	95	97	94	96	95	91	92	96	96
No	6	8	5	3	6	4	5	9	8	4	4
HAVE YOU EVER DONE VOLUNTEER WORK IN A FIELD YOU ARE INTERESTED IN?											
Yes	30	31	27	30	34	22	32	31	23	31	30
No	70	68	62	69	66	78	68	68	76	69	69
HAVE YOU EVER PARTICIPATED IN A WORK STUDY, FLEXIBLE CAMPUS, SHARED EXPERIENCE, OR STUDENT INTERNSHIP PROGRAM?											
Yes	18	23	15	14	17	16	15	28	15	15	18
No	81	75	84	85	83	83	84	71	83	85	81
WHICH BEST DESCRIBES THE PROGRAM IN WHICH YOU ARE NOW ENROLLED?											
General	13	11	10	17	14	16	17	10	10	12	20
Vocational	12	13	11	14	20	16	2	23	29	3	13
College-bound	53	53	61	47	49	49	51	38	35	69	46
Business or commercial	13	13	12	12	10	12	19	18	15	10	14
I don't know	8	9	6	9	6	7	10	10	10	6	7

Summary of Results

Attitude toward school. About 50% of 17-year-olds and 42% of 13-year-olds reported "liking" or "strongly liking" school, while 16-19% of both age groups indicated that they "dislike" or "strongly dislike" school, and 34-40% reported feeling that "school is OK."

Discussions about career plans

- Discussions with guidance counselor: The percentage of students who reported talking to a guidance counselor increased from 24% among the 13-year-olds to 61% for the 17-year-olds. Further, 27% of the 17-year-olds reported discussing their career plans with a guidance counselor at least three times in the previous year.
- Discussions with parents: At both age levels, about nine out of 10 students reported that they have discussed their career plans with one or both of their parents.
- Discussions with friends: About eight of every 10 students in both age groups indicated that they have talked about their career plans with friends.
- Discussions with a person in a job of interest: More 17-year-olds than 13-year-olds (47% versus 34%) indicated that they have discussed their career plans with a person in a job of interest to them.

- Discussion with teachers: More than twice as many 17-year-olds as 13-year-olds (37% versus 15%) have talked with a teacher about career plans.

Career aptitude tests. A sizable proportion of students at each age level indicated that they have never taken a test designed to help them decide on their career plans (53% of 13- and 37% of 17-year-olds). Furthermore, about 12% of 13-year-olds and 23% of 17-year-olds did not know whether or not they have ever taken such a test.

Usefulness of field trips. Almost nine of every 10 students replied that school-sponsored field trips taught them useful things.

Usefulness of schooling. Most students reported feeling that their schooling has been "somewhat" or "very" useful in helping them to fulfill their career objectives. Only 12% of the 13-year-olds and 16% of the 17-year-olds replied that school has been "not very useful" in this respect.

Parental involvement. More 17-year-olds (18%) than 13-year-olds (11% reported that their parents were "hardly at all" involved in their schoolwork, while 48% of the older students and 61% of the younger ones reported "quite a bit" or "a lot" of parental involvement.

Future plans

- Career aspirations: A little more than half of the students at each age level indicated that they aspired to a high-level ("professional" or "managerial") job. Almost a third wanted a middle-level ("sales" or "skilled labor") job, and about 10% aspired to low-level ("semi-" or "unskilled") jobs.

- Certainty about career aspirations: At both age levels 78% of the students reported that they were either "very sure" or "somewhat sure" about the kind of job they would like to have in the future.
- Parental encouragement to continue schooling: About one-fifth of the students in each age group reported that their parents wanted them to continue their education after high school "only a little" or "hardly at all," compared to four-fifths who said that their parents encourage them to do so "quite a bit" or "a lot."
- Post-high-school plans: At both age levels, 41% of the students plan on attending a four-year college, while 12-19% plan on obtaining a full-time job or combining jobs and school. Further, 31% of 13-year-olds and 18% of 17-year-olds have not yet decided on post-high-school plans.

Volunteer work. Among 17-year-olds, 30% indicated that they have, at some time, done volunteer work in a career area of possible interest to them.

Current program enrollment

- Participation in work-study and other programs: Only 18% of 17-year-olds reported that they had at some time participated in a work-study, flexible campus, shared experience, or student internship program.

- Present high school program: Just over half of the students (53%) reported that they were in college-bound programs, and approximately 13% of the students indicated that they were enrolled in each of the other types of programs (general, vocational, or business). About 8% of the students responded that they "did not know" the type of program in which they were currently enrolled.

CHAPTER 10

RESULTS OF THE PRINCIPAL QUESTIONNAIRE

Introduction

The questionnaire administered to principals of all participating schools collected information on school variables that might bear a relationship to achievement (see Chapter 8). However, the responses of the principals to the questionnaire items are interesting in and of themselves as a general characterization of the schools in which testing occurred.

The questionnaires for principals of 13- and 17-year-old students were similar but not identical. Copies of the principal questionnaires appear in Appendix C. The data are given as the percentage of principals of students at each age level selecting each response to each questionnaire item. The results for all principal questionnaire items are presented in Tables 10.1 and 10.2 for principals of 13- and 17-year-olds, respectively. The tables display results for principals in the total sample and in each region and kind of community.

The narrative that accompanies the tables highlights the most policy-relevant of these findings. The narrative, organized by questionnaire item, presents a summary of the responses by principals of students at each age level. Since principals normally characterize students by grade level rather than age level, principals of 13-year-olds were asked to respond to the questionnaire in relation to their *eighth-grade* students, while

TABLE 10.1

Crosstabulations of Principal Questionnaire Results (13-Year-Olds) by Region and Kind of Community, Reported in Percentages

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
ORDER THE FOLLOWING FIVE OBJECTIVES IN TERMS OF THE EMPHASIS PLACED ON INSTRUCTION OR GUIDANCE IN YOUR SCHOOL.											
• KNOWLEDGE OF JOB CHARACTERISTICS:											
First	12	9	0	13	12	22	21	12	8	15	8
Second	21	18	31	13	29	33	0	24	25	21	17
Third	19	27	13	13	24	11	14	0	25	15	33
Fourth	12	9	19	13	6	11	14	6	17	9	17
Fifth	35	36	38	50	29	22	36	59	25	36	21
• KNOWLEDGE OF JOB REQUIREMENTS:											
First	20	9	31	13	29	22	14	18	25	18	21
Second	22	27	13	13	12	33	36	12	25	18	33
Third	21	23	19	13	35	33	0	12	25	27	17
Fourth	33	36	38	63	18	11	36	53	25	33	21
Fifth	2	5	0	0	6	0	0	6	0	0	4
• CAREER DECISION MAKING:											
First	9	9	13	0	12	11	7	0	17	6	17
Second	16	18	13	13	29	11	7	12	17	18	17
Third	38	36	44	38	18	22	71	53	33	42	25
Fourth	17	27	6	13	24	33	0	18	25	9	25
Fifth	17	9	25	38	18	22	7	18	8	24	13

TABLE 10.1 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
• BASIC SKILLS											
First	28	32	31	25	18	33	29	35	33	24	25
Second	17	23	13	38	13	11	7	35	8	15	13
Third	12	14	13	13	12	11	7	18	0	12	13
Fourth	14	0	25	13	24	11	14	12	17	21	4
Fifth	28	32	19	13	29	33	36	0	42	27	42
• ATTITUDES AND VALUES											
First	27	36	25	50	29	0	14	29	17	33	21
Second	30	18	44	25	18	56	36	24	33	27	38
Third	16	18	13	25	18	11	14	29	17	15	8
Fourth	16	18	6	0	24	22	21	6	8	21	21
Fifth	9	9	13	0	12	11	7	12	25	3	8
HOW SATISFIED ARE YOU WITH THE LEVEL OF KNOWLEDGE OR SKILL OF STUDENTS IN RELATION TO THESE OBJECTIVES?											
• KNOWLEDGE OF JOB CHARACTERISTICS:											
Very satisfied	2	0	0	0	12	0	0	0	0	0	8
Satisfied	37	41	31	50	24	44	43	35	33	49	25
Dissatisfied	52	46	69	38	59	56	43	65	58	36	63
Very dissatisfied	5	9	0	13	6	0	0	0	8	9	0
• KNOWLEDGE OF JOB REQUIREMENTS:											
Very satisfied	5	5	6	0	12	0	0	0	8	3	8
Satisfied	41	36	44	25	47	44	43	41	17	49	42
Dissatisfied	47	46	50	63	41	44	43	59	58	36	46
Very dissatisfied	5	9	0	13	0	11	0	0	17	6	0

TABLE 10.1 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
• CAREER DECISION MAKING											
Very satisfied	2	0	0	0	0	11	7	6	0	0	4
Satisfied	34	46	25	13	36	22	43	24	25	46	29
Dissatisfied	57	41	75	63	65	67	43	65	75	42	63
Very dissatisfied	4	5	0	25	0	0	0	6	0	6	0
• BASIC SKILLS											
Very satisfied	1	5	0	0	0	0	0	0	0	3	0
Satisfied	61	59	50	75	59	67	64	59	58	61	63
Dissatisfied	31	27	38	13	41	33	29	41	33	24	33
Very dissatisfied	2	5	0	13	0	0	0	0	0	6	0
• ATTITUDE AND VALUES											
Very satisfied	7	14	6	0	6	11	0	0	8	9	8
Satisfied	63	50	63	63	77	44	79	71	42	67	63
Dissatisfied	24	32	25	38	18	33	7	24	33	21	25
Very dissatisfied	2	0	0	0	0	11	7	6	8	0	0
INDICATE THE *TWO* MAJOR WAYS IN WHICH THE CAREER AND OCCUPATIONAL DEVELOPMENT PROGRAM AT YOUR SCHOOL COULD BE IMPROVED.											
More guidance counseling personnel	22	9	25	13	35	44	14	24	33	15	25
More inservice training for guidance personnel	11	9	25	13	0	11	7	0	25	15	4
More inservice training for teachers	38	55	44	25	29	30	50	47	42	42	25
More career education classes	29	23	19	50	47	22	22	35	25	21	38
More infusion of career concepts into other courses	59	73	44	50	65	56	57	65	25	64	67
Better materials	9	5	19	0	6	11	14	6	8	9	13
More innovative learning experiences	21	18	13	50	18	22	21	18	17	24	21
Other	5	5	6	0	0	11	7	0	17	3	4
None	6	5	6	0	0	22	7	6	8	6	4

TABLE 10.1 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
SHOULD ALL STUDENTS MEET A MINIMUM ACHIEVEMENT LEVEL IN READING, WRITING, AND MATHEMATICS AS ONE REQUIREMENT FOR HIGH SCHOOL GRADUATION?											
Yes	79	91	69	88	88	67	64	77	83	79	79
No	14	5	19	13	12	22	21	12	17	9	21
Not sure	7	5	13	0	0	11	14	12	0	12	0
WHICH OF THE FOLLOWING SHOULD SET THESE STANDARDS?											
Local education agencies	33	41	50	0	18	44	29	18	42	46	21
State board of education	8	5	0	13	24	0	7	12	8	3	13
Legislature	1	0	0	0	0	0	7	0	0	3	0
Both local agencies and state board of education	54	50	44	75	59	44	57	65	50	46	58
Other	2	5	0	13	0	0	0	6	0	0	4
None of above	2	0	6	0	0	11	0	0	0	3	4
IS YOUR SCHOOL AN ESEA TITLE I SCHOOL?											
Yes	45	36	38	50	47	44	64	65	42	39	42
No	52	59	56	50	53	56	36	35	58	58	54
HOW DO YOU RATE PARENTAL SUPPORT OF YOUR SCHOOLS POLICIES AND PROCEDURES?											
Excellent	35	32	56	13	47	33	14	35	25	46	25
Good	41	41	25	63	24	33	71	24	25	49	50
Average	19	23	6	25	24	22	14	24	42	3	25
Fair	4	0	6	0	6	11	0	12	0	3	0
Poor	1	5	0	0	0	0	0	6	0	0	0

TABLE 10.1 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
HOW DO YOU RATE STUDENT ATTITUDE TOWARD SCHOOL AND LEARNING?											
Excellent	22	23	19	13	35	11	21	12	0	33	25
Good	48	46	63	50	35	56	43	35	50	61	38
Average	27	23	19	38	29	33	29	47	33	6	38
Fair	2	5	0	0	0	0	7	6	8	0	0
Poor	0	0	0	0	0	0	0	0	0	0	0
FIRST QUARTER PERCENTAGE OF ATTENDANCE											
73-94	50	50	38	38	65	67	43	88	67	21	54
95-98	45	46	56	50	35	22	57	6	25	73	46
SECOND QUARTER PERCENTAGE OF ATTENDANCE											
70-91	40	41	31	38	41	44	43	77	42	24	33
92-97	55	55	56	50	59	44	57	12	50	70	67

TABLE 10.2

Crosstabulations of Principal Questionnaire Results (17-Year-Olds) by Region and Kind of Community, Reported in Percentages

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
ORDER THE FOLLOWING FIVE OBJECTIVES IN TERMS OF THE EMPHASIS PLACED ON INSTRUCTION OR GUIDANCE IN YOUR SCHOOL.											
• KNOWLEDGE OF JOB CHARACTERISTICS:											
First	16	12	24	22	5	13	22	15	39	15	9
Second	18	35	14	22	5	13	13	20	15	25	9
Third	15	8	19	22	16	0	22	5	23	13	21
Fourth	14	12	10	22	16	25	13	15	8	15	15
Fifth	37	35	33	11	58	50	30	45	15	33	46
• KNOWLEDGE OF JOB REQUIREMENTS:											
First	26	23	33	11	21	38	30	30	23	33	18
Second	19	15	19	33	16	25	17	15	31	15	21
Third	19	19	10	11	26	25	22	10	23	18	24
Fourth	31	35	38	33	32	13	26	40	15	30	33
Fifth	5	8	9	11	5	0	4	5	8	5	3
• CAREER DECISION MAKING:											
First	13	8	14	0	16	13	22	15	15	8	18
Second	16	8	10	22	26	38	13	15	0	18	21
Third	33	35	38	44	37	25	22	35	31	38	27
Fourth	25	46	24	11	16	13	17	20	54	25	15
Fifth	13	4	14	22	5	13	26	15	0	13	18

TABLE 10.2 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
• BASIC SKILLS											
First	24	31	33	33	11	13	17	20	31	23	24
Second	27	23	24	22	37	13	35	30	31	28	24
Third	17	23	10	0	16	25	22	35	0	13	18
Fourth	17	12	10	22	21	38	17	15	8	18	21
Fifth	15	12	24	22	16	13	9	0	31	20	12
• ATTITUDES AND VALUES											
First	26	23	10	33	42	25	26	25	23	18	36
Second	25	23	43	0	16	13	30	30	15	23	27
Third	17	15	19	22	21	25	9	10	15	28	9
Fourth	9	0	10	11	11	13	17	10	8	8	12
Fifth	24	39	19	33	11	25	17	25	39	25	15
HOW SATISFIED ARE YOU WITH THE LEVEL OF KNOWLEDGE OR SKILL OF STUDENTS IN RELATION TO THESE OBJECTIVES?											
• KNOWLEDGE OF JOB CHARACTERISTICS:											
Very satisfied	3	0	0	11	0	0	9	0	8	3	3
Satisfied	51	54	52	44	53	38	52	50	54	55	46
Dissatisfied	42	39	43	44	37	63	39	45	39	38	46
Very dissatisfied	5	8	5	0	11	0	0	5	0	5	6
• KNOWLEDGE OF JOB REQUIREMENTS:											
Very satisfied	7	4	0	0	16	0	13	10	0	5	9
Satisfied	49	42	57	44	53	38	52	45	46	58	42
Dissatisfied	42	50	43	56	21	63	35	40	54	38	42
Very dissatisfied	3	4	0	0	11	0	0	5	0	0	6

TABLE 10.2 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
• CAREER DECISION MAKING											
Very satisfied	2	0	0	0	0	0	9	0	0	0	6
Satisfied	53	42	52	56	68	38	57	45	54	55	55
Dissatisfied	42	50	43	44	26	63	35	50	39	43	36
Very dissatisfied	4	8	5	0	5	0	0	5	8	3	3
• BASIC SKILLS											
Very satisfied	9	4	5	0	11	0	26	5	0	5	21
Satisfied	60	62	62	67	68	63	48	60	69	63	55
Dissatisfied	28	31	33	33	16	38	26	35	31	30	21
Very dissatisfied	2	4	0	0	5	0	0	0	0	3	3
• ATTITUDE AND VALUES											
Very satisfied	10	8	5	11	11	0	22	10	0	8	18
Satisfied	56	39	71	44	74	63	48	50	69	53	58
Dissatisfied	29	46	19	44	11	25	30	35	23	38	18
Very dissatisfied	4	8	5	0	5	0	0	5	8	3	3
INDICATE THE *TWO* MAJOR WAYS IN WHICH THE CAREER AND OCCUPATIONAL DEVELOPMENT PROGRAM AT YOUR SCHOOL COULD BE IMPROVED.											
More guidance counseling personnel	18	19	29	22	16	13	9	20	15	15	21
More inservice training for guidance personnel	19	19	14	11	26	25	17	40	15	10	18
More inservice training for teachers	43	35	52	44	32	13	61	50	39	45	36
More career education classes	17	4	19	33	21	38	13	5	15	10	33
More infusion of career concepts into other courses	61	54	52	56	74	88	61	45	69	73	55
Better materials	9	19	0	22	0	13	9	5	15	15	3
More innovative learning experiences	18	31	24	0	21	13	4	25	15	18	15
Other	7	8	0	11	5	0	13	5	0	8	9
More	8	12	10	0	5	0	13	5	15	8	9

TABLE 10.2 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
SHOULD ALL STUDENTS MEET A MINIMUM ACHIEVEMENT LEVEL IN READING, WRITING, AND MATHEMATICS AS ONE REQUIREMENT FOR HIGH SCHOOL GRADUATION?											
Yes	76	77	81	89	84	63	65	75	77	70	85
No	12	8	14	0	5	13	26	15	15	15	6
Not sure	10	15	5	11	5	25	9	10	8	13	9
WHICH OF THE FOLLOWING SHOULD SET THESE STANDARDS?											
Local education agencies	35	23	33	33	32	50	48	20	39	45	30
State board of education	9	12	19	0	5	13	0	0	0	15	9
Legislature	1	0	0	11	0	0	0	0	0	0	3
Both local agencies and state board of education	48	54	48	56	58	25	39	60	54	38	52
Other	3	8	0	0	0	13	0	10	0	0	3
None of above	3	0	0	0	5	0	9	5	0	3	3
IS YOUR SCHOOL AN ESEA TITLE I SCHOOL?											
Yes	43	42	33	22	68	25	48	60	39	30	52
No	48	46	62	67	32	75	35	40	54	60	36
No response	9	12	5	11	0	0	17	0	7	10	12
HOW DO YOU RATE PARENTAL SUPPORT OF YOUR SCHOOLS POLICIES AND PROCEDURES?											
Excellent	15	15	19	0	16	25	13	5	23	18	15
Good	56	46	57	78	53	50	61	45	46	58	64
Average	20	23	10	11	32	13	22	40	8	20	12
Fair	7	12	5	11	0	13	4	10	8	5	6
Poor	3	4	10	0	0	0	0	0	15	0	3

TABLE 10.2 (continued)

Questionnaire Item	Total	Region						Kind of Community			
		1	2	3	4	5	6	1	2	3	4
HOW DO YOU RATE STUDENT ATTITUDE TOWARD SCHOOL AND LEARNING?											
Excellent	8	15	10	0	0	0	9	0	8	15	3
Good	61	39	62	78	84	75	57	55	46	65	67
Average	24	35	14	22	11	25	30	30	23	20	24
Fair	7	12	10	0	5	0	4	15	15	0	6
Poor	1	0	5	0	0	0	0	0	8	0	0
FIRST QUARTER PERCENTAGE OF ATTENDANCE											
58-91	32	50	33	0	26	38	26	60	54	10	33
92-98	56	39	48	78	68	50	65	20	39	75	61
No response	12	11	19	22	6	12	9	20	7	15	6
SECOND QUARTER PERCENTAGE OF ATTENDANCE											
53-89	39	54	24	33	37	75	26	60	62	18	42
90-97	49	39	52	44	58	13	65	25	31	68	49
No response	12	7	24	23	5	12	9	15	7	14	9
HOW AVAILABLE ARE CAREER EDUCATION COURSES?											
Generally	73	73	67	67	79	38	87	75	85	68	73
Somewhat	18	12	29	33	16	13	13	10	15	23	18
To a minimum extent	6	8	5	0	0	38	0	5	0	8	6
Not available	4	8	0	0	5	13	0	10	0	3	3

principals of 17-year-olds were asked to respond in relation to their *eleventh-grade* students.

The chapter concludes with a profile describing the outstanding differences between students and schools in Big Cities versus Residential Suburbs.

Summary of Results

Objective-referenced instruction. Principals were asked to rank order the objectives assessed by the test in terms of instructional emphasis in their schools and to indicate their satisfaction with student achievement on each one.

Considering the five objectives as ranked from 1 = highest to 5 = lowest emphasis, the objectives were ranked, on the average, by principals as follows:

High School Principals	Middle School Principals
1. Knowledge of Job Requirements	1. Attitudes and Values
2. Basic Skills	2. Knowledge of Job Requirements
3. Attitudes and Values	3. Basic Skills
4. Career Decision Making	4. Career Decision Making
5. Knowledge of Job Characteristics	5. Knowledge of Job Characteristics

Between 66% and 69% of high school principals were either "satisfied" or "very satisfied" with achievement on Attitudes and Values and Basic

Skills, while only 54-56% felt this way with regard to the other three objectives. This discrepancy was even more substantial at the middle school level, where 62-70% were satisfied to some degree about Attitudes and Values and Basic Skills but only 36-46% felt as such regarding the other three objectives.

Ways to improve the career education program. Principals were asked to cite two major ways in which the career education programs in their schools could be improved. Principals tended to select answers which favored the integration of career education into the regular curriculum, rather than the separation of such instruction from students' day-to-day school experience. About 60% of all principals advocated "more infusion of career education into the curricula of other courses," and about 40% desired "more inservice training for academic teachers regarding career education." Just under 20% of principals of 17-year-olds indicated a need for more guidance or career counseling personnel, more career classes, and more innovative methods; slightly more principals of 13-year-olds cited these needs. In addition, 19% of middle and junior high school principals and 11% of high school principals cited a need for more inservice training of guidance staff in career education.

Minimum achievement standards. At both age levels, more than three out of four principals responded "yes" to the question: "Do you believe that all students must meet some specified minimum standard of achievement in reading, writing, and mathematics as one requirement for the awarding of the high school diploma?" (79% and 76% for principals of 13- and 17-year-olds, respectively).

The overwhelming majority of principals felt that, if minimal competency standards were to be used as a basis for high school graduation, the local educational agencies should have *some* responsibility for setting those standards. About one-third of all principals felt that the responsibility should rest solely with local educational agencies, while another 50% replied that the local agencies and the State Board of Education should share that responsibility jointly. Only about 9% of the principals at both age levels replied that the State Department of Education should have sole responsibility for setting standards, and only 1% of the principals indicated that the state legislature should set minimal competency standards.

School participation in ESEA Title I program. Just under half of all principals replied that their schools receive ESEA Title I funds.

Parental support of the school. Approximately three of every four principals rated parental support of their schools as "good" or "excellent," while very few (5% and 10% of principals of 13- and 17-year-olds, respectively) rated parental support as either "fair" or "poor."

Student attitude toward school. Very few principals (2-8%) described student attitude toward school as either "fair" or "poor." About 70% rated student attitude as "good" or "excellent."

School attendance. Almost 83% of the middle school principals reported that their schools have an average first-quarter attendance rate of 91% or better, but only 69% reported this high a rate for the second quarter. At the high school level, 77% of the principals reported first-quarter attendance at 91% or above, while just under a half reported this attendance rate for the second quarter.

Availability of career courses. About three-quarters of principals of 17-year-olds responded that career courses were "generally" available at their schools, while another 18% said that these courses were "somewhat" available. (This question was not asked of principals of 13-year-old students.)

Profile of Students and Schools in Big Cities

Results reported earlier indicated that Big-City students tended to score below the statewide average, while students in Residential Suburbs tended to score above the statewide average. An attempt was made to identify characteristics of Big-City schools that may contribute to differential assessment in comparison to students in Residential Suburbs. The resultant "profile," based on responses to the principal and student questionnaires, is presented below.

In comparison to Residential Suburbs, *Big Cities* are places in which:

- the proportion of 17-year-olds in the ninth or tenth grade is larger.
- students are likely to be given drill work or reading and writing assignments less frequently.
- 13-year-olds are more likely to discuss their career plans with a guidance counselor, while 17-year-olds are less likely to do so.

- 17-year-olds are less likely to have taken a career aptitude test.
- a larger proportion of parents of school-age children work in low-status occupations.
- students are less likely to aspire to high-status occupations.
- parents of 17-year-olds are less likely to encourage postsecondary education.
- students are less likely to plan on attending a four-year college.
- a larger proportion of 17-year-olds are enrolled in vocational programs and participate in work-study programs.
- principals are less likely to encounter "excellent" or "good" parental support of the school and student attitudes toward school.
- the average attendance rate in each quarter tends to be lower.

CHAPTER 11

RESULTS OF THE BENCHMARK PANEL

Introduction

The purpose of this chapter is to present the results of the Benchmark Panel on Career and Occupational Development. The panel consisted of educators, school administrators, and business representatives from throughout Massachusetts. Their task was to compare the actual test performance of Massachusetts students to their own "benchmark" of desirable achievement. Through a process of discussion on each item, the panel attempted to reach a consensus of opinion on whether or not additional emphasis ought to be placed on teaching students the skills measured by that item. "Consensus of opinion" was defined as the agreement of at least two-thirds of the panel members.

Summary of Results

Table 11.1 shows, for each age level, the percentage of items for each objective on which there was "consensus" among panel members that more emphasis was required, and the percentage of items for which additional emphasis was not necessary. Also shown is the percentage of items in each objective for which the panel members could not reach a consensus (i.e., more than one-third but fewer than two thirds felt that more instructional emphasis was required).

TABLE 11.1

Results of the Benchmark Panel:
Consensus Opinion of Panel Members*

Objective	*Total Number of Items*	Percentage of Items		
		More Emphasis Necessary	No More Emphasis Necessary	Undecided
13-YEAR-OLDS:				
1. Job characteristics	*21*	24	71	5
2. Job requirements	*30*	33	30	37
3. Career decision making	*27*	48	22	30
4. Basic skills	*18*	11	67	22
5. Attitudes and values	*17*	18	71	12
17-YEAR-OLDS:				
1. Job characteristics	*21*	24	67	10
2. Job requirements	*30*	17	57	27
3. Career decision making	*27*	44	30	26
4. Basic skills	*18*	11	83	5
5. Attitudes and values	*17*	18	76	6

*Participants responded to the following question:

> Given the percentage of Massachusetts students answering this item correctly, do you feel that more emphasis ought to be placed on teaching students the skills measured by this item?

Consensus of opinion is defined as the agreement of at least 2/3 of the participants.

The Benchmark Panel members felt that the most emphasis ought to be placed on teaching both 13- and 17-year-olds the skills necessary to make career decisions (Objective 3). This objective showed the highest percentage of items on which additional emphasis was felt to be required. The panel also felt that 13-year-olds, in particular, should be given additional instruction in the kinds of abilities, training, and preparation required for various careers (Objective 2). It was the opinion of the panel that students at both age levels were receiving sufficient instruction overall in the skills measured by the remaining three objectives, although there were at least a few items in each of these objectives about which they expressed concern.

APPENDIX A

Copies of Test Items for 13- and 17-Year-Olds, with Corresponding Percentages of All Students Selecting Each Response

KEY FOR APPENDIX A

		Age level	
OBJECTIVE NAME	Response	13	17
Question as it appeared in test, including the item number (reduced size)			
Numbers corresponding to choices	1	__%	__%
	2	__%	__%
	3	__%	__%
	4	__%	__%
• The correct response is darkened for multiple-choice questions and entered on the line for open-ended questions. • Complete descriptions of the NAEP criteria for scoring open-ended items appear in Appendix H. • Where the percentages of students selecting all responses do not add to approximately 100%, the remaining percentage of students made no response.			

Percentage of students selecting each response

OBJECTIVE 1: JOB CHARACTERISTICS

In Questions 5 to 7, three people describe the work they do. Read each description and then write the name of the worker's job on the line provided.

5. I set up and operate machine tools and I fit and assemble parts to make or repair metal parts, mechanisms, tools or machines. I have to understand mechanics, shop math and properties of metals. I must be able to read blueprints, sketches or descriptions of the part I am to replace. What is the name of my job?

	Response	13	17
☐ ANSWER: (1) machinist, metal engineer, etc.	1	11%	26%
(2) incorrect response	2	81%	66%

6. I design buildings and organize the services necessary for their construction. First I consult with my client to find out what his space requirements are and to give him the information he needs about cost, design, building time and so forth. I prepare sketches and sometimes models of the proposed design for my client. What is the name of my job?

	Response	13	17
☐ ANSWER: (1) architect, etc.	1	71%	80%
(2) incorrect response	2	24%	17%

7. I receive and pay out money and keep records of bank transactions. When I receive checks and cash that customers want to deposit I verify the amount and make sure the checks have been endorsed. I make entries in depositors' passbooks or else issue receipts. What is the name of my job?

	Response	13	17
☐ ANSWER: (1) bank teller, cashier, etc.	1	52%	68%
(2) incorrect response	2	45%	30%

OBJECTIVE 1: JOB CHARACTERISTICS

	Response	13	17
8. Which person usually earns the most money?			
1 ● plumber	1	56%	81%
2 ○ tailor	2	16%	8%
3 ○ bus driver	3	3%	1%
4 ○ watchman	4	12%	4%
5 ○ I don't know.	5	13%	7%
9. Which person usually earns the most money?			
1 ● secretary	1	46%	58%
2 ○ telephone operator	2	13%	12%
3 ○ nurses' aide	3	20%	12%
4 ○ store clerk	4	6%	4%
5 ○ I don't know.	5	15%	14%
10. Which one of the following jobs requires heavy lifting, crawling and bending?			
1 ● automobile repairman	1	82%	87%
2 ○ salesman	2	1%	1%
3 ○ barber	3	0%	0%
4 ○ railroad engineer	4	14%	10%
5 ○ I don't know.	5	2%	1%

OBJECTIVE 1: JOB CHARACTERISTICS

Shown below are eleven different occupations and four different vocational areas into which the occupations can be grouped. Next to each occupation, fill in one circle to show the vocational area in which that occupation should be grouped.

VOCATIONAL AREA

	OCCUPATION	Skilled Services	Skilled Crafts	Health Care	Sales
	Examples:				
	Jewelry maker	1 ○	2 ●	3 ○	4 ○
	Interior designer	1 ●	2 ○	3 ○	4 ○
14.	Barber	1 ●	2 ○	3 ○	4 ○
15.	Auto mechanic	1 ●	2 ○	3 ○	4 ○
16.	Store clerk	1 ○	2 ○	3 ○	4 ●
17.	Physical therapist	1 ○	2 ○	3 ●	4 ○
18.	TV repairperson	1 ●	2 ○	3 ○	4 ○

	Response	13	17
14.	1	44%	49%
	2	15%	12%
	3	39%	37%
	4	2%	1%
15.	1	70%	75%
	2	27%	24%
	3	0%	0%
	4	1%	0%
16.	1	5%	4%
	2	2%	1%
	3	1%	0%
	4	91%	94%
17.	1	9%	11%
	2	2%	1%
	3	87%	87%
	4	0%	0%
18.	1	71%	78%
	2	26%	20%
	3	0%	0%
	4	2%	1%

OBJECTIVE 1: JOB CHARACTERISTICS

VOCATIONAL AREA

	OCCUPATION	Skilled Services	Skilled Crafts	Health Care	Sales
19.	Insurance agent	1 ○	2 ○	3 ○	4 ●
20.	Printer	1 ○	2 ●	3 ○	4 ○
21.	Dental assistant	1 ○	2 ○	3 ●	4 ○
22.	Real estate broker	1 ○	2 ○	3 ○	4 ●
23.	Nutritionist	1 ○	2 ○	3 ●	4 ○
24.	Furniture maker	1 ○	2 ●	3 ○	4 ○

	Response	13	17
19.	1	19%	13%
	2	3%	2%
	3	7%	4%
	4	70%	81%
20.	1	25%	25%
	2	70%	73%
	3	1%	0%
	4	2%	1%
21.	1	16%	13%
	2	5%	2%
	3	79%	84%
	4	0%	0%
22.	1	16%	12%
	2	2%	1%
	3	1%	0%
	4	80%	86%
23.	1	3%	2%
	2	3%	1%
	3	91%	95%
	4	1%	1%
24.	1	10%	6%
	2	86%	93%
	3	1%	0%
	4	3%	1%

OBJECTIVE 1: JOB CHARACTERISTICS

39. Which of the following occupations would allow a person to be most free from the care and worry involved in supervising other workers on the job?

	Response	13	17
1 ○ foreman	1	25%	13%
2 ○ director of operations	2	11%	8%
3 ○ airline pilot	3	25%	28%
4 ● teacher	4	39%	51%

40. Which of the following occupations would provide a person with the greatest responsibility for controlling and directing others?

	Response	13	17
1 ○ police officer	1	42%	40%
2 ● ship's captain	2	28%	33%
3 ○ personnel manager	3	19%	19%
4 ○ lawyer	4	10%	7%

41. Which of the following occupations would provide a person with the most independence on the job?

	Response	13	17
1 ● teacher	1	23%	20%
2 ○ draftsperson	2	18%	18%
3 ○ farm worker	3	51%	58%
4 ○ factory production line worker	4	7%	4%

56. Which occupation would probably provide a person with the highest income?

	Response	13	17
1 ○ teacher	1	13%	5%
2 ○ laboratory technician	2	59%	56%
3 ● civil engineer	3	22%	35%
4 ○ cook	4	4%	3%

OBJECTIVE 2: JOB REQUIREMENTS

11. Which one of the following jobs requires good color vision?

	Response	13	17
1 ○ English teacher	1	1%	1%
2 ● chemist	2	87%	92%
3 ○ machinist	3	3%	3%
4 ○ lawyer	4	1%	0%
5 ○ I don't know.	5	7%	4%

12. For which one of the following jobs is good eyesight important?

	Response	13	17
1 ● watch repairman	1	86%	94%
2 ○ grocery store clerk	2	7%	2%
3 ○ janitor	3	1%	0%
4 ○ gas station attendant	4	3%	1%
5 ○ I don't know.	5	4%	2%

13. On which one of the following jobs is it important to work fast with your fingers?

	Response	13	17
1 ○ clothing store salesperson	1	3%	2%
2 ○ policeman	2	3%	1%
3 ● secretary	3	92%	96%
4 ○ janitor	4	1%	0%
5 ○ I don't know.	5	1%	1%

OBJECTIVE 2: JOB REQUIREMENTS

For each of the nine occupations listed below, fill in one circle to show what education or training is usually required for that occupation.

	OCCUPATION	General High School or Less	Vocational-Technical School	Apprenticeship	Four Years or More of College
	Example:				
	Practical nurse	1 ○	2 ●	3 ○	4 ○
27.	Waitress—waiter	1 ●	2 ○	3 ○	4 ○
28.	Glass blower	1 ○	2 ○	3 ●	4 ○
29.	Hospital attendant	1 ●	2 ○	3 ○	4 ○
30.	Social worker	1 ○	2 ○	3 ○	4 ●

	Response	13	17
27.	1	79%	91%
	2	9%	3%
	3	10%	4%
	4	1%	0%
28.	1	10%	9%
	2	34%	26%
	3	51%	62%
	4	4%	1%
29.	1	11%	23%
	2	41%	43%
	3	9%	9%
	4	38%	24%
30.	1	17%	14%
	2	15%	9%
	3	13%	6%
	4	53%	70%

OBJECTIVE 2: JOB REQUIREMENTS

	OCCUPATION	General High School or Less	Vocational-Technical School	Apprenticeship	Four Years or More of College
31.	Air conditioning and refrigeration mechanic	1 ○	2 ●	3 ○	4 ○
32.	Blacksmith	1 ○	2 ○	3 ●	4 ○
33.	Pharmacist	1 ○	2 ○	3 ○	4 ●
34.	Automobile salesperson	1 ●	2 ○	3 ○	4 ○
35.	Engineer	1 ○	2 ○	3 ○	4 ●

	Response	13	17
31.	1	4%	1%
	2	66%	81%
	3	15%	12%
	4	13%	5%
32.	1	15%	9%
	2	22%	18%
	3	59%	71%
	4	3%	1%
33.	1	7%	1%
	2	17%	6%
	3	7%	4%
	4	65%	87%
34.	1	43%	52%
	2	23%	16%
	3	22%	21%
	4	11%	10%
35.	1	3%	1%
	2	42%	32%
	3	10%	6%
	4	44%	59%

OBJECTIVE 2: JOB REQUIREMENTS

36. Which one of the following jobs usually requires the LONGEST period of training?

	Response	13	17
1 ○ manicurist	1	18%	7%
2 ● plumber	2	53%	75%
3 ○ assembly line worker	3	11%	4%
4 ○ truck driver	4	5%	4%
5 ○ I don't know.	5	13%	10%

37. Which one of the following jobs usually requires the LONGEST period of training?

	Response	13	17
1 ● lawyer	1	64%	79%
2 ○ computer operator	2	9%	4%
3 ○ electronic technician	3	20%	12%
4 ○ insurance salesman	4	1%	0%
5 ○ I don't know.	5	6%	5%

38. Which one of the following jobs usually requires the LONGEST period of training?

	Response	13	17
1 ● registered nurse	1	48%	62%
2 ○ practical nurse	2	3%	2%
3 ○ hospital orderly	3	4%	1%
4 ○ X-ray technician	4	35%	29%
5 ○ I don't know.	5	9%	6%

OBJECTIVE 2: JOB REQUIREMENTS

Listed below are eight different jobs and eight kinds of characteristics people need in those jobs. In the blank space next to each job, write the number of the one characteristic that you think is MOST important for that job. Only one number should be written in each blank, and every number should be used.

	OCCUPATION			CHARACTERISTIC
42.	Radio announcer	4	1	Spatial relationships
43.	Police officer	3	2	Friendliness
44.	Secretary	8	3	Fairness
45.	Butcher	6	4	Fluent speech
46.	Bus driver	7	5	Manual dexterity
47.	TV repairperson	5	6	Cleanliness
48.	Receptionist	2	7	Alertness
49.	Draftsperson	1	8	Careful listening

Item	Age	Percentage of Students Choosing Each Response							
		1	2	3	4	5	6	7	8
42	13	3	9	1	77*	1	1	1	5
	17	2	4	1	89*	0	0	0	2
43	13	4	11	41*	1	2	1	37	2
	17	4	5	63*	1	2	0	23	1
44	13	12	14	4	5	10	7	6	40*
	17	13	15	2	2	17	7	6	37*
45	13	6	4	8	1	7	70*	2	1
	17	4	3	4	0	6	78*	2	1
46	13	13	24	11	2	7	2	34*	5
	17	10	15	6	1	5	1	58*	3
47	13	17	8	11	2	40*	4	6	9
	17	17	7	9	1	43*	1	5	15
48	13	14	26*	7	8	5	7	5	25
	17	9	48*	2	5	2	4	2	25
49	13	26*	3	14	3	26	7	7	10
	17	37*	2	10	1	27	6	5	11

* correct response

OBJECTIVE 2: JOB REQUIREMENTS

	Response	13	17
54. John has outlined a course that includes many mathematics and fine arts (art) classes. These are also his best classes. He plans two years training beyond high school. This program will prepare him as:			
1 ○ an artist	1	23%	13%
2 ● a draftsperson	2	26%	38%
3 ○ a teacher	3	5%	3%
4 ○ an architect	4	46%	46%
55. Sue has chosen a career in law enforcement. She plans to enter as a police officer. The most appropriate community activity for Sue would be:			
1 ○ interview police officers	1	14%	10%
2 ● part-time or volunteer work at police department	2	73%	81%
3 ○ YWCA club work	3	3%	3%
4 ○ attend municipal court sessions	4	9%	5%

OBJECTIVE 2: JOB REQUIREMENTS

Each of the five occupations listed below requires some knowledge of mathematics. Some of the occupations require only general mathematics, and some require a knowledge of very advanced mathematics. Next to each occupation, fill in one circle to indicate whether that occupation requires a knowledge of general mathematics or advanced mathematics.

MATHEMATICS REQUIRED

	OCCUPATION	General Mathematics	Advanced Mathematics
	Examples:		
	Carpenter	1 ●	2 ○
	Astronomer	1 ○	2 ●
84.	Sales clerk	1 ●	2 ○
85.	Electrician	1 ●	2 ○
86.	Engineer	1 ○	2 ●
87.	Bank teller	1 ●	2 ○
88.	Meteorologist (weather forecaster)	1 ○	2 ●

	Response	13	17
84.	1	79%	91%
	2	20%	8%
85.	1	37%	37%
	2	62%	62%
86.	1	31%	9%
	2	68%	90%
87.	1	48%	69%
	2	51%	30%
88.	1	29%	21%
	2	70%	78%

OBJECTIVE 3: CAREER DECISION MAKING

4. List five different things that a person should think about in choosing a job or career.

	Response	13	17
☐ (1) one correct response	1	5%	2%
(2) two correct responses	2	9%	5%
(3) three correct responses	3	17%	11%
(4) four correct responses	4	23%	16%
(5) five correct responses (mastery criterion)	5	41%	64%

OBJECTIVE 3: CAREER DECISION MAKING

26. Suppose you want to find out more about a job you are interested in. What are five things you could do NOW to find out more about the job before you take the job or begin job training?

	Response	13	17
(1) one correct response	1	12%	7%
(2) two correct responses	2	16%	14%
(3) three or more correct responses (mastery criterion)	3	48%	65%
(4)			
(5)			

In Questions 50 and 51, you are given some information about a person. Then you are given four statements about his or her future career. From the information given, choose the ONE statement that you think is best for that person.

50. Diane does a lot of wood shop work at home and also takes shop courses at school. She has made several professional-looking cabinets and has won a prize for one in a citywide contest. She is now trying to decide if she has enough skill to continue with cabinetmaking.

What do you think?

	Response	13	17
1 ● The work she has done suggests that she has above-average cabinetmaking skill and interests.	1	42%	58%
2 ○ If her friends think she has cabinetmaking skill, she probably does and should continue making cabinets.	2	7%	4%
3 ○ She should plan carefully, since she may not have enough skill to be a successful cabinetmaker later on.	3	31%	25%
4 ○ She has skill in making cabinets, and she should also design them.	4	19%	13%

51. Warren lives near the ocean and is fascinated by it. Last summer he worked as a busboy at one of the nearby resort hotels, and this summer he'll be a bait boy on one of the deep-sea fishing boats. After high school, he is thinking of becoming a merchant seaman. He knows they make good money, but he doesn't know if he'd like being at sea for sometimes as long as six months.

What do you think?

	Response	13	17
1 ○ He should depend on his father's judgment about whether he should go to sea.	1	2%	1%
2 ○ He sounds like a born seaman. He'll probably work his way up in rank quickly.	2	6%	3%
3 ○ No matter how much more he found out about living at sea, he couldn't be sure he would really like it.	3	17%	9%
4 ● He should get some more information and experience. He might sign on for a summer cruise as a cabin boy and see how he likes it.	4	74%	86%

In Questions 52 and 53, the stories describe a problem that somebody has. Then there are four statements about things that he or she should do. From the information given, choose the one statement that you think is best for the person.

52. Elaine wants to be an engineer and has the ability to be one. But her grades are poor, and she thinks she may not get into college.

What should she do?

	Response	13	17
1 ○ work harder and get better grades	1	56%	49%
2 ● talk with her teachers or a counselor	2	37%	45%
3 ○ expect to get into college despite her grades, because she has the ability	3	4%	4%
4 ○ change her occupational choice to something else that doesn't require college	4	2%	2%

53. Max has average grades in high school and could graduate in another two years. But he is tired of school, and would like to get a full-time job.

What should he do?

	Response	13	17
1 ○ join the Army	1	9%	7%
2 ○ continue his education	2	36%	43%
3 ● talk with others (dropouts, employers, etc.) about what he should do	3	41%	42%
4 ○ drop out, work full time, and go to school at night	4	13%	8%

OBJECTIVE 3: CAREER DECISION MAKING

You are thinking about talking with a qualified person about a career that interests you. Beside each statement below, fill in the first circle if the statement IS a benefit you would gain from talking to this person. Fill in the second circle if it IS NOT a benefit.

1 ● 2 ○ 57. You would find out about how much you could expect to be paid in that career.

1 ● 2 ○ 58. You would find out some of the high school courses that would be useful to you in that career.

1 ● 2 ○ 59. You would have a better idea of the skills needed for the career.

1 ○ 2 ● 60. You would know personally the people you would be working with after you finished school.

1 ● 2 ○ 61. You would have a better idea of chances for advancement in the career.

	Response	13	17
57.	1	78%	86%
	2	20%	13%
58.	1	87%	91%
	2	12%	8%
59.	1	79%	91%
	2	19%	8%
60.	1	29%	30%
	2	69%	69%
61.	1	70%	81%
	2	28%	17%

OBJECTIVE 3: CAREER DECISION MAKING

75. Which of the following is an "Equal Opportunity Employer" NOT expected to do?

	Response	13	17
1 ○ hire people of any race or creed	1	10%	5%
2 ● hire people under the age of 16	2	62%	77%
3 ○ hire people on the basis of ability	3	17%	12%
4 ○ hire both men and women	4	7%	3%

76. All of the following are fringe benefits EXCEPT:

	Response	13	17
1 ○ hospitalization payments	1	13%	7%
2 ○ paid vacation	2	21%	8%
3 ○ a retirement program	3	13%	5%
4 ● salary and wages	4	50%	79%

77. Which one of the following is a Social Security benefit?

	Response	13	17
1 ○ paid holidays	1	8%	4%
2 ○ overtime pay	2	10%	5%
3 ○ vacation pay	3	6%	3%
4 ● retirement pay	4	74%	87%

OBJECTIVE 3: CAREER DECISION MAKING

In each of the following paragraphs you are given information about a student. From the information given, you are to select the most appropriate career possibilities for each student.

94. Rita is a high school senior who has had trouble with social studies and communications subjects. She has always enjoyed working with mechanical objects and she has performed well in shop classes. Her hobbies have included making model cars and airplanes and tearing down and repairing motors. She can work most problems in general math and algebra but hasn't tried advanced math. Her career plans might include such jobs as:

	Response	13	17
1 ○ engineer, draftsperson, architect	1	40%	29%
2 ○ orderly, porter, custodian	2	6%	3%
3 ○ electronic assembler, ranch hand, stock clerk	3	14%	10%
4 ● mechanic, plumber, pattern maker	4	36%	55%

95. Linda studied her school record and interest and ability test scores. She found that she had excellent math and science skills, that she enjoyed outdoor activities and had strong interests in social service, science, and artistic activities. Her communication skills were not outstanding and she disliked sales and verbal activities. Reasonable career plans for Linda could include:

	Response	13	17
1 ○ accountant, author, chemist	1	22%	19%
2 ● geologist, oceanographer, botanist	2	59%	72%
3 ○ author, actor, teacher	3	10%	5%
4 ○ librarian, clergyman, realtor	4	5%	3%

96. Fred's school record shows many C's, a few B's, and no A's or D's. He is slightly above average. He works better with people than with things or data. He likes mechanical, artistic, and computational activities and is good at handling details. He would be expected to be successful if he will explore occupations including the following:

	Response	13	17
1 ● accounting clerk, cashier, bank teller	1	35%	38%
2 ○ nurse, social worker, counselor	2	26%	29%
3 ○ secretary, receptionist, salesperson	3	21%	19%
4 ○ hospital orderly, porter, hotel bell captain	4	14%	11%

OBJECTIVE 3: CAREER DECISION MAKING

The following paragraph gives you information about the abilities and interests of a student your age, and lists some possible future occupations the student may consider. Many jobs might be appropriate, but from those listed you are asked to select the occupation which seems BEST suited for the person described.

97. Since childhood, Karen has been interested in transportation, and has also enjoyed doing things with her hands. She scores high on tests of mechanical ability, has excellent eye-hand coordination, and is weak in reading and language arts skills. After completing high school, she would like to attend a trade school or to find work accompanied by an on-the-job training program.

Of the following occupations, which ONE seems most consistent with Karen's interests and abilities?

	Response	13	17
1 ● airplane mechanic	1	29%	41%
2 ○ mechanical engineer	2	44%	40%
3 ○ airport guard	3	8%	4%
4 ○ director, traffic safety council	4	15%	13%

98. Tom is in his senior year of high school. His school record shows much success in industrial arts subjects. His math courses have been above average. He has had trouble with reading and writing subjects. He does not feel very happy with his record in social studies and science. Tom's school record suggests that his post-high-school plans should include:

	Response	13	17
1 ○ business college	1	27%	28%
2 ● apprenticeship	2	35%	53%
3 ○ four-year college	3	30%	15%
4 ○ no training	4	4%	3%

OBJECTIVE 3: CAREER DECISION MAKING

Below is a list of occupations. For each occupation, fill in one circle to show whether, during the next ten years, that occupation will need MORE workers or FEWER workers than are needed now.

	OCCUPATION	MORE	FEWER
	Examples:		
	Accountant	1 ○	2 ●
	Dental hygienist	1 ●	2 ○
99.	Mathematician	1 ●	2 ○
100.	Forester	1 ●	2 ○
101.	Business machine repairperson	1 ●	2 ○
102.	Elementary teacher	1 ○	2 ●
103.	Computer programmer	1 ●	2 ○
104.	Laboratory technician	1 ●	2 ○
105.	Electrical engineer	1 ●	2 ○
106.	Secretary	1 ●	2 ○

	Response	13	17
99.	1	53%	48%
	2	43%	50%
100.	1	46%	48%
	2	49%	50%
101.	1	67%	76%
	2	28%	22%
102.	1	47%	34%
	2	48%	64%
103.	1	74%	85%
	2	21%	12%
104.	1	70%	82%
	2	25%	16%
105.	1	69%	78%
	2	27%	20%
106.	1	31%	33%
	2	65%	65%

OBJECTIVE 4: BASIC SKILLS

1. A job resume can best be described as a:

	Response	13	17
1 ○ plan of action	1	20%	7%
2 ○ task that is started more than once	2	23%	9%
3 ● short personal and employment history	3	24%	63%
4 ○ job application letter	4	29%	20%

2. Assume that Ted, a fellow employee, has made some mistakes in his work that he does not know about. If the mistakes go uncorrected, they will cause problems later on. Which ONE of the following is the BEST thing for you to do?

	Response	13	17
1 ○ let someone else find the mistakes	1	1%	1%
2 ○ tell the boss about the mistakes so that the boss can do something about them	2	21%	11%
3 ○ send Ted an unsigned letter describing the mistakes	3	2%	1%
4 ● talk to Ted about the mistakes and offer to help him	4	76%	87%

3. You are a factory worker and have a complaint to make about some safety equipment which is not being supplied. With whom should you talk FIRST to try to solve the problem?

	Response	13	17
1 ○ fellow workers	1	15%	14%
2 ● your supervisor	2	66%	78%
3 ○ the personnel director	3	15%	7%
4 ○ the fire department	4	3%	1%

OBJECTIVE 4: BASIC SKILLS

Fill in the first circle beside each of the actions described below that IS an IMPORTANT example of an interview skill. Fill in the second circle beside each action that IS NOT an IMPORTANT example.

1 ● 2 ○ 66. being on time for the interview

1 ○ 2 ● 67. speaking only when asked a question

1 ● 2 ○ 68. answering questions accurately

1 ● 2 ○ 69. showing interest in the job

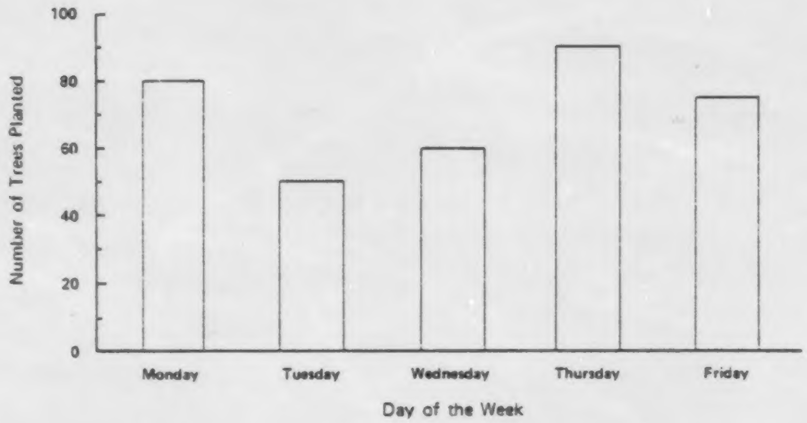
74. Which question should you ask FIRST during a job interview?

1 ○ "What kind of pension plan does the job offer?"
2 ○ "When are the vacation times?"
3 ● "What are the job responsibilities?"
4 ○ "How much does the job pay?"

	Response	13	17
66.	1	89%	97%
	2	9%	2%
67.	1	42%	34%
	2	56%	65%
68.	1	90%	96%
	2	8%	3%
69.	1	90%	97%
	2	8%	2%
74.	1	7%	3%
	2	1%	1%
	3	69%	85%
	4	21%	10%

OBJECTIVE 4: BASIC SKILLS

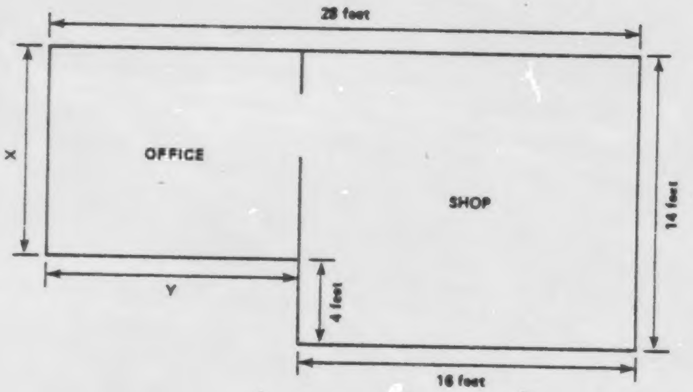
Below is a bar graph that shows the number of trees planted along a highway in a week.



	Response	13	17
78. How many trees were planted on Wednesday?			
☐ ANSWER: (1) 53, 59, 60, 61, or 62	1	91%	94%
(2) incorrect response	2	8%	5%
79. How many trees were planted on Thursday?			
☐ ANSWER: (1) 88, 89, 90, 91, or 92	1	75%	81%
(2) incorrect response	2	24%	18%
80. How many trees were planted on Friday?			
☐ ANSWER: (1) 73, 74, 75, 76, or 77	1	21%	34%
(2) incorrect response	2	78%	65%

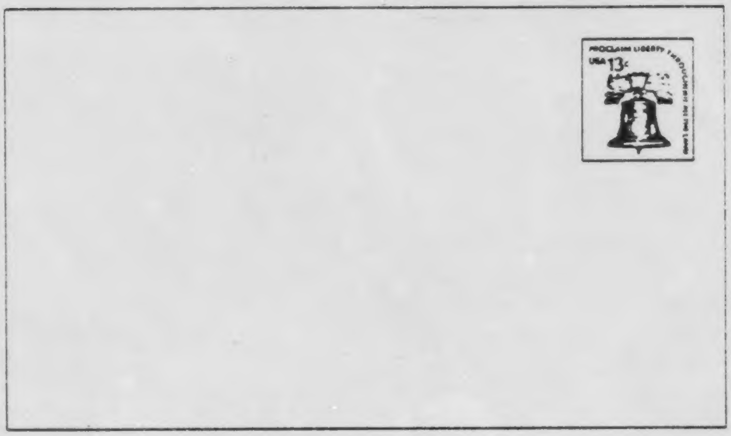
OBJECTIVE 4: BASIC SKILLS

Below is a layout of an office and shop area.



	Response	13	17
81. How many feet long is the office at Side X?			
☐ ANSWER: (1) 10 or 14-4	1	63%	85%
(2) incorrect response	2	31%	12%
82. How many feet long is the office at Side Y?			
☐ ANSWER: (1) 12 or 28-16	1	56%	81%
(2) incorrect response	2	38%	15%
83. How many square feet of floor space are there in the office?			
☐ ANSWER: (1) 120 or if student correctly multiplies his answers to 81 and 82	1	23%	35%
(2) incorrect response	2	61%	52%

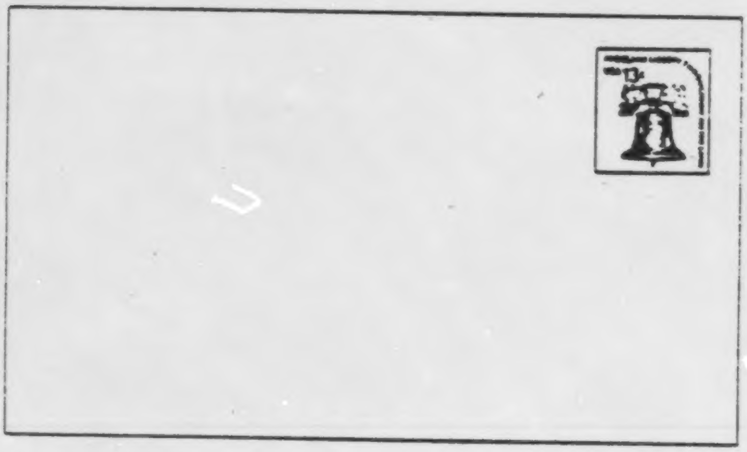
89. Pretend that your name is Dale Roberts and you live at 1545 Lake Street in Narka, Kansas. The zip code for Narka, Kansas, is 66960. You have written a letter to John Way. He lives at 345 Moose Street, Nome, Alaska. The zip code for Nome, Alaska, is 99762. Address the envelope below. Make sure you write down everything that should go on the envelope.



	Response	13	17
89a Return Name			
(1) Correct response		91%	96%
(2) Incorrect response		3%	0%
89b Return Street			
(1) Correct response		91%	96%
(2) Incorrect response		3%	0%
89c Return City, State, and Zip Code			
(1) Correct response		91%	96%
(2) Incorrect response		3%	0%

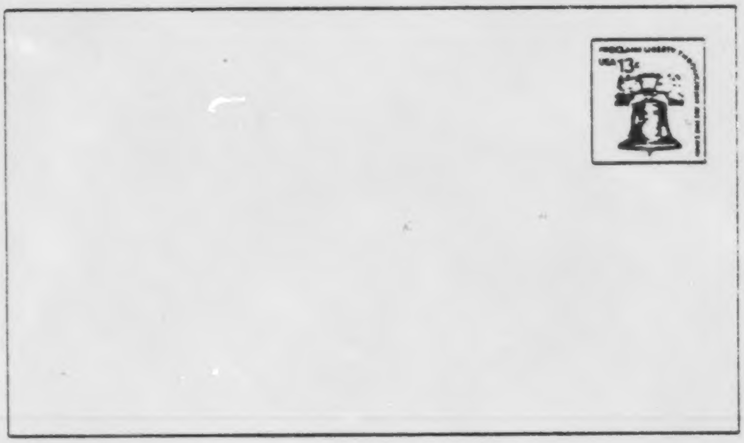
OBJECTIVE 4: BASIC SKILLS

89. Pretend that your name is Dale Roberts and you live at 1545 Lake Street in Narka, Kansas. The zip code for Narka, Kansas, is 66960. You have written a letter to John Way. He lives at 345 Moose Street, Nome, Alaska. The zip code for Nome, Alaska, is 99762. Address the envelope below. Make sure you write down everything that should go on the envelope.



Response	13	17
89d Name		
(1) Correct response	94%	97%
(2) Incorrect response	2%	1%
89e Street		
(1) Correct response	94%	97%
(2) Incorrect response	3%	1%
89f City, State, and Zip Code		
(1) Correct response	94%	97%
(2) Incorrect response	3%	1%

89. Pretend that your name is Dale Roberts and you live at 1545 Lake Street in Narka, Kansas. The zip code for Narka, Kansas, is 66960. You have written a letter to John Way. He lives at 345 Moose Street, Nome, Alaska. The zip code for Nome, Alaska, is 99762. Address the envelope below. Make sure you write down everything that should go on the envelope.



Response	13	17
89g Entire Envelope		
(1) One component correct	0%	0%
(2) Two components correct	1%	0%
(3) Three components correct	3%	2%
(4) Four components correct	1%	0%
(5) Five components correct	1%	1%
(6) Six components correct	89%	95%

OBJECTIVE 4: BASIC SKILLS

Below is a size table.

SIZE TABLE FOR SOCKS			
Shoe Size	Sock Size	Shoe Size	Sock Size
6-6½	9½	9-9½	11
7-7½	10	10-10½	11½
8-8½	10½	11-11½	12

90. According to the table, what size socks should you buy if you wear size 10 shoes?

1 ○ 7
2 ○ 7½
3 ○ 10
4 ○ 10½
5 ○ 11
6 ● 11½

Response	13	17
1	1%	1%
2	3%	1%
3	8%	4%
4	5%	2%
5	3%	1%
6	79%	91%

92. You want to call Mr. Jones on the telephone. You look in the telephone book for his number. You would find it between which names?

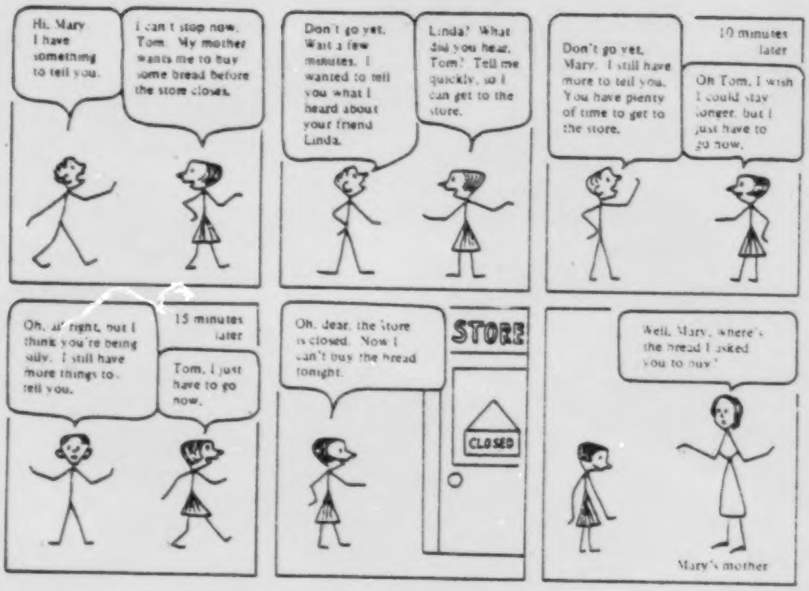
1 ○ Jackson and Jacobs
2 ○ Jacobs and James
3 ○ James and Johnson
4 ● Johnson and Judson
5 ○ Judson and Justus

Response	13	17
1	1%	0%
2	1%	1%
3	12%	9%
4	78%	84%
5	6%	4%

OBJECTIVE 4: BASIC SKILLS

	Response	13	17
93. A factory manager has just called a meeting of his foremen to decide whether they can make and deliver 200 inflatable boats of a new type within two weeks. Which one of the following subjects would be the LEAST worthwhile to discuss at the meeting?			
1 ○ whether the factory has enough materials on hand for 200 boats	1	10%	7%
2 ● what should be printed on the boxes the boats are shipped in	2	53%	69%
3 ○ the kind of material to be used	3	9%	5%
4 ○ whether overtime will be required to meet the two-week deadline	4	14%	11%
5 ○ I don't know.	5	10%	6%

OBJECTIVE 5: ATTITUDES AND VALUES


Hi, Mary. I have something to tell you.
I can't stop now, Tom. My mother wants me to buy some bread before the store closes.
Don't go yet. Wait a few minutes. I wanted to tell you what I heard about your friend Linda.
Linda? What did you hear, Tom? Tell me quickly, so I can get to the store.
10 minutes later
Don't go yet, Mary. I still have more to tell you. You have plenty of time to get to the store.
Oh Tom, I wish I could stay longer, but I just have to go now.
Oh, all right, but I think you're being silly. I still have more things to tell you.
15 minutes later
Tom, I just have to go now.
Oh, dear, the store is closed. Now I can't buy the bread tonight.
STORE
CLOSED
Well, Mary, where's the bread I asked you to buy?
Mary's mother

25. Whose fault was it that Mary did not buy the bread for her mother that night?

	Response	13	17
1 ○ It was Tom's fault because he talked too long.	1	10%	7%
2 ○ It was no one's fault because Mary didn't want to be rude and leave Tom.	2	37%	32%
3 ○ It was Tom's fault because he wouldn't let Mary leave.	3	19%	16%
4 ● It was Mary's fault because she talked too long.	4	30%	42%
5 ○ I don't know.	5	4%	3%

OBJECTIVE 5: ATTITUDES AND VALUES

Below are four things a person might do to improve chances for success as a nurse in a hospital. Fill in the first circle beside each one that IS important for success. Fill in the second circle beside each one that IS NOT important.

1 ● 2 ○ 62. get along well with the other nurses
1 ● 2 ○ 63. try to be accurate, even if it means working more slowly
1 ○ 2 ● 64. change jobs about once a year to keep fresh
1 ● 2 ○ 65. offer new ideas for simplifying the paperwork

	Response	13	17
62.	1	72%	81%
	2	26%	18%
63.	1	84%	88%
	2	14%	11%
64.	1	9%	6%
	2	89%	92%
65.	1	51%	57%
	2	46%	41%

Lynn, a young bookkeeper, is progressing toward her career goal as an accountant. Fill in the first circle beside each behavior that will increase her chances for success. Fill in the second circle beside each one that will have little effect on her success.

1 ● 2 ○ 70. She is enrolling in college mathematics courses.
1 ● 2 ○ 71. She expresses new ideas about her bookkeeping job.
1 ○ 2 ● 72. She makes decisions without consulting her boss.
1 ● 2 ○ 73. She is dependable and enthusiastic about her job.

	Response	13	17
70.	1	77%	90%
	2	21%	9%
71.	1	63%	73%
	2	35%	26%
72.	1	22%	18%
	2	76%	81%
73.	1	89%	95%
	2	9%	4%

OBJECTIVE 5: ATTITUDES AND VALUES

91. Suppose you are a factory worker operating a machine which has a special safety shield on it. You are required to put up the safety shield whenever the machine is being used so that hot pieces of metal which come off the machine cannot hit and burn other workers. One day you are operating the machine without putting up the safety shield. A piece of hot metal flies through the air and severely burns another worker who was in a place where he wasn't supposed to be.

Are you responsible for the injury to the other person?

	Response	13	17
1 ● yes	1	73%	83%
2 ○ no	2	16%	9%
3 ○ I don't know.	3	8%	6%

Listed below are various attitudes that people might have about working. Some of these attitudes might help people get ahead in their jobs, and some might not. Read each statement. If you think the attitude would help someone be successful in his or her job, fill in the circle in the column headed IMPORTANT. If you don't think the attitude is important for success, fill in the circle in the column headed NOT IMPORTANT.

		IMPORTANT	NOT IMPORTANT		Response	13	17
107.	Always look for ways to improve things.	1 ●	2 ○	107.	1	90%	93%
					2	5%	4%
108.	Keep your mouth shut and don't stir things up.	1 ○	2 ●	108.	1	46%	41%
					2	49%	56%
109.	Keep learning how to do your job better.	1 ●	2 ○	109.	1	92%	95%
					2	3%	2%
110.	Get along well with the other workers.	1 ●	2 ○	110.	1	80%	91%
					2	14%	6%
111.	Don't tell anyone about mistakes you have made.	1 ○	2 ●	111.	1	20%	15%
					2	75%	82%
112.	Always do the kind of work you can be proud of.	1 ●	2 ○	112.	1	80%	90%
					2	15%	7%
113.	Do only what you are told to do.	1 ○	2 ●	113.	1	75%	60%
					2	20%	36%

APPENDIX B

Copies of Student Questionnaire Instruments

Questions About You

1. You are:

1 ○ male
2 ○ female

2. What grade are you in? (Fill in ONE circle.)

1 ○ 6th grade
2 ○ 7th grade
3 ○ 8th grade
4 ○ 9th grade
5 ○ 10th grade

3. Which sentence below shows how you feel about school? (Fill in ONE circle.)

1 ○ I really don't like school much at all.
2 ○ Mostly I don't like school, but there are some things about it I like.
3 ○ School is O.K., I guess, but there are some things about it I don't like.
4 ○ Mostly I like school, but there are some things about it I don't like so much.
5 ○ I really like school a lot.

How often are you given the following kinds of homework to do? (Fill in ONE circle for each kind.)

		almost every day	once or twice a week	once or twice a month or less often
4.	Drill work (for example, practicing arithmetic problems or spelling words)	1 ○	2 ○	3 ○
5.	Reading assigned material (for example, library books or textbooks)	1 ○	2 ○	3 ○
6.	Writing on assigned topics (for example, essays, term papers, or book reports)	1 ○	2 ○	3 ○
7.	Work that requires you to think or act on your own (for example, doing a project or selecting a topic to research or study)	1 ○	2 ○	3 ○

Have you ever talked seriously to any of the following people about your plans for the future—what you want to do, what training you need, etc.? (Fill in ONE circle for each person.)

		yes	no
8.	Career or guidance counselor	1 ○	2 ○
9.	Parent	1 ○	2 ○
10.	Friend	1 ○	2 ○
11.	Person who does a job of interest to you	1 ○	2 ○
12.	Teacher	1 ○	2 ○

13. There are tests to help you decide on your career or job plans. These tests help you find out such things as what you like to do best, what jobs you would rather have, or if you have mechanical, clerical, or other abilities. Did you ever take such a test? (Fill in ONE circle.)

1 ○ yes
2 ○ no
3 ○ I don't know.

14. In general, do you feel that field trips sponsored by your school (for example, visiting a museum, a college, a factory, a farm) teach you things that are useful for you to know? (Fill in ONE circle.)

1 ○ yes
2 ○ no
3 ○ I have never gone on a field trip.

15. How useful do you feel your schooling has been in helping you to think about the type of work you would like to do after you leave high school? (Fill in ONE circle.)

1 ○ not very useful
2 ○ somewhat useful
3 ○ very useful
4 ○ I don't know.

16. How much do you feel your parents are involved in what you do in school (for example, visiting your teacher at school or asking you questions about your schoolwork or school activities)? (Fill in ONE circle.)

1 ○ hardly at all
2 ○ only a little
3 ○ quite a bit
4 ○ a lot

17. Does your father or your mother work or have a job?

1 ○ yes
2 ○ no
3 ○ I don't know.

18. If your father or your mother has a job, do they do any work like this?

1 ○ yes
2 ○ no
3 ○ I don't know.

teacher; professor; medical doctor; dentist; lawyer; scientist; counselor; minister or rabbi; nurse; medical technician; social worker; engineer; own or manage a store, restaurant, business, factory, or farm

19. After you finish your schooling, do you want to do a job like any of the ones listed in Question 18?

1 ○ yes
2 ○ no
3 ○ I don't know.

20. If your father or your mother has a job, do they do any work like this?

1 ○ yes
2 ○ no
3 ○ I don't know.

salesperson for a company or store; sell real estate, insurance, or cars; secretary; clerk; baker; meat cutter; carpenter; electrician; mechanic; plumber; bricklayer; tailor; fire fighter; soldier; police officer; foreman over other workers

21. After you finish your schooling, do you want to do a job like any of the ones listed in Question 20?

1 ○ yes
2 ○ no
3 ○ I don't know.

22. If your father or your mother has a job, do they do any work like this?

1 ○ yes
2 ○ no
3 ○ I don't know.

factory worker; barber or beautician; bus driver; gas station service person; cashier; delivery work; streets department work; help others clean; janitor; doorman; farm worker

23. After you finish your schooling, do you want to do a job like any of the ones listed in Question 22?

1 ○ yes
2 ○ no
3 ○ I don't know.

24. How sure are you about the kind of job you would like to have in the future? (Fill in ONE circle.)

1 ○ not very sure
2 ○ somewhat sure
3 ○ very sure

25. To what extent do your parents want you to go to school or college after you finish high school? (Fill in ONE circle.)

1 ○ hardly at all
2 ○ only a little
3 ○ quite a bit
4 ○ a lot

26. After you leave high school, what do you plan to do? (Fill in ONE circle.)

1 ○ get a full-time job or enlist in the armed services
2 ○ get a full-time job and go to school at night
3 ○ get additional special training (nursing school, technical school, business school, etc.)
4 ○ attend a two-year junior or community college
5 ○ attend a regular four-year college or university
6 ○ I haven't decided.

27. Have you ever done work for which you were responsible on a regular basis (for example, part-time or summer work or regular household chores)?

1 ○ yes
2 ○ no

Questions About You

1. You are:

   1 ○ male
   2 ○ female

2. What grade are you in? (Fill in ONE circle.)

   1 ○ 8th grade
   2 ○ 9th grade
   3 ○ 10th grade
   4 ○ 11th grade
   5 ○ 12th grade

3. Which sentence below shows how you feel about school? (Fill in ONE circle.)

   1 ○ I really don't like school much at all.
   2 ○ Mostly I don't like school, but there are some things about it I like.
   3 ○ School is O.K., I guess, but there are some things about it I don't like.
   4 ○ Mostly I like school, but there are some things about it I don't like so much.
   5 ○ I really like school a lot.

How often are you given the following kinds of homework to do? (Fill in ONE circle for each kind.)

		almost every day	once or twice a week	once or twice a month or less often
4.	Drill work (for example, practicing arithmetic problems or spelling words)	1 ○	2 ○	3 ○
5.	Reading assigned material (for example, library books or textbooks)	1 ○	2 ○	3 ○
6.	Writing on assigned topics (for example, essays, term papers, or book reports)	1 ○	2 ○	3 ○
7.	Work that requires you to think or act on your own (for example, doing a project or selecting a topic to research or study)	1 ○	2 ○	3 ○

Have you ever talked seriously to any of the following people about your plans for the future—what you want to do, what training you need, etc.? (Fill in ONE circle for each person.)

		yes	no
8.	Career or guidance counselor	1 ○	2 ○
9.	Parent	1 ○	2 ○
10.	Friend	1 ○	2 ○
11.	Person who does a job of interest to you	1 ○	2 ○
12.	Teacher	1 ○	2 ○

13. There are tests to help you decide on your career or job plans. These tests help you find out such things as what you like to do best, what jobs you would rather have, or if you have mechanical, clerical, or other abilities. Did you ever take such a test? (Fill in ONE circle.)

1 ○ yes
2 ○ no
3 ○ I don't know.

14. In general, do you feel that field trips sponsored by your school (for example, visiting a museum, a college, a factory, a farm) teach you things that are useful for you to know? (Fill in ONE circle.)

1 ○ yes
2 ○ no
3 ○ I have never gone on a field trip.

15. How useful do you feel your schooling has been in helping you to fulfill your career or job objectives? (Fill in ONE circle.)

1 ○ not very useful
2 ○ somewhat useful
3 ○ very useful
4 ○ I don't know.

16. How much do you feel your parents are involved in what you do in school (for example, visiting your teacher at school or asking you questions about your schoolwork or school activities)? (Fill in ONE circle.)

1 ○ hardly at all
2 ○ only a little
3 ○ quite a bit
4 ○ a lot

17. Does your father or your mother work or have a job?

1 ○ yes
2 ○ no
3 ○ I don't know.

18. If your father or your mother has a job, do they do any work like this?

1 ○ yes
2 ○ no
3 ○ I don't know.

teacher; professor; medical doctor; dentist; lawyer; scientist; counselor; minister or rabbi; nurse; medical technician; social worker; engineer; own or manage a store, restaurant, business, factory, or farm

19. After you finish your schooling, do you want to do a job like any of the ones listed in Question 18?

1 ○ yes
2 ○ no
3 ○ I don't know.

20. If your father or your mother has a job, do they do any work like this?

1 ○ yes
2 ○ no
3 ○ I don't know.

salesperson for a company or store; sell real estate, insurance, or cars; secretary; clerk; baker; meat cutter; carpenter; electrician; mechanic; plumber; bricklayer; tailor; fire fighter; soldier; police officer; foreman over other workers

21. After you finish your schooling, do you want to do a job like any of the ones listed in Question 20?

1 ○ yes
2 ○ no
3 ○ I don't know.

22. If your father or your mother has a job, do they do any work like this?

1 ○ yes
2 ○ no
3 ○ I don't know.

factory worker; barber or beautician; bus driver; gas station service person; cashier; delivery work; streets department work; help others clean; janitor; doorman; farm worker

23. After you finish your schooling, do you want to do a job like any of the ones listed in Question 22?

1 ○ yes
2 ○ no
3 ○ I don't know.

24. How sure are you about the kind of job you would like to have in the future? (Fill in ONE circle.)

1 ○ not very sure
2 ○ somewhat sure
3 ○ very sure

25. To what extent do your parents want you to go to school or college after you finish high school? (Fill in ONE circle.)

- 1 ○ hardly at all
- 2 ○ only a little
- 3 ○ quite a bit
- 4 ○ a lot

26. After you leave high school, what do you plan to do? (Fill in ONE circle.)

- 1 ○ get a full-time job or enlist in the armed services
- 2 ○ get a full-time job and go to school at night
- 3 ○ get additional special training (nursing school, technical school, business school, etc.)
- 4 ○ attend a two-year junior or community college
- 5 ○ attend a regular four-year college or university
- 6 ○ I haven't decided.

27. How many times in the last 12 months have you discussed career plans with a guidance counselor in your school? (Fill in ONE circle.)

- 1 ○ none
- 2 ○ once or twice
- 3 ○ three times or more
- 4 ○ I don't remember or there is no guidance counselor.

Have you ever done any of the following? (Fill in ONE circle for each item.)

		yes	no
28.	Done work for which you were responsible on a regular basis (for example, part-time or summer work or regular household chores)	1 ○	2 ○
29.	Done volunteer work in a career area of possible interest to you	1 ○	2 ○
30.	Participated in a work-study, flexible campus, shared experience, or student internship program	1 ○	2 ○

31. Which of the following best describes the program or curriculum in which you are now enrolled? (Fill in ONE circle.)

1 ○ general program
2 ○ vocational program
3 ○ college-bound program
4 ○ business (commercial) program
5 ○ I don't know.

STOP DO NOT TURN THE PAGE UNTIL TOLD TO DO SO.

APPENDIX C

Copies of Principal Questionnaire Instruments

___ ___ _ _ COD-13

Massachusetts Statewide Educational Assessment 1977-78

PRINCIPAL QUESTIONNAIRE

Dear Principal:

Please answer the following questions relative to the EIGHTH GRADE in your school. Thank you very much for your cooperation.

PLEASE RETURN NO LATER THAN MARCH 24, 1978

1. Five objectives in Career and Occupational Development (COD) are listed below. Please order them in terms of the extent to which instruction or guidance is given to students in the grade indicated above. Put a "1" next to the objective which receives the most emphasis, a "5" next to the objective least emphasized, etc. Use each number (1, 2, 3, 4, 5) only once.

COD OBJECTIVE	ORDER
A. knowledge of the characteristics (classifications, major duties, nature of tasks, and salary) of various careers and occupations	___
B. knowledge of the abilities, training, and preparation required or useful for various careers and occupations	___
C. knowledge and ability necessary to plan and implement career decisions	___
D. application of basic skills (numerical, communication, and interpersonal) useful in seeking and retaining employment	___
E. personal attitudes and values contributing to career success	___

2. How satisfied are you with the level of knowledge or skill of students in the above grade relative to these objectives? Check the appropriate box.

	SATISFACTION LEVEL			
OBJECTIVE	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
A. knowledge of the characteristics (classifications, major duties, nature of tasks, and salary) of various careers and occupations	1 ☐	2 ☐	3 ☐	4 ☐
B. knowledge of the abilities, training, and preparation required or useful for various careers and occupations	1 ☐	2 ☐	3 ☐	4 ☐
C. knowledge and ability necessary to plan and implement career decisions	1 ☐	2 ☐	3 ☐	4 ☐
D. application of basic skills (numerical, communication, and interpersonal) useful in seeking and retaining employment	1 ☐	2 ☐	3 ☐	4 ☐
E. personal attitudes and values contributing to career success	1 ☐	2 ☐	3 ☐	4 ☐

3. Indicate the TWO major ways in which the program in career and occupational development in your school could be improved for the grade above. (Check two.)

1 ____ more guidance and/or career counseling personnel

2 ____ more inservice training for guidance personnel regarding career and occupational education

3 ____ more inservice training for teachers regarding career and occupational education

4 ____ more career and occupational education classes

5 ____ more infusion of career and occupational education concepts into curricula of other courses (e.g., mathematics)

6 ____ better career and occupational education instructional materials

7 ____ more innovative career and occupational education learning experiences for students (e.g., career day, shadowing, mock interviews)

8 ____ other; please specify: ______________________________

9 ____ none of the above

4. Do you believe that all students must meet some specified minimum standard of achievement in reading, writing, and mathematics as one requirement for the awarding of the high school diploma?

1 ____ yes

2 ____ no

3 ____ I'm not sure.

5. Which of the following do you believe should be responsible for setting minimal competency standards to be used as a basis for the awarding or denial of the high school diploma? (Check one.)

1 ____ local education agencies

2 ____ State Board of Education

3 ____ Legislature

4 ____ both local education agencies and the State Board of Education

5 ____ other; please specify: ______________________________

6 ____ none of the above

6. Is your school an ESEA Title I school?

1 ____ yes

2 ____ no

7. How would you rate parental support of your school's policies and procedures? Circle one.

Excellent	Good	Average	Fair	Poor
1	2	3	4	5

8. How would you rate the attitudes of the majority of your students toward school and learning? Circle one.

Excellent	Good	Average	Fair	Poor
1	2	3	4	5

9. Please look at page 2 of your School Register. From the Quarterly Reports section, please provide us with the percentage of attendance for the first and second quarters of this year for grade eight (total of all classes). Note: Principals of Boston schools need not complete this question. Attendance information will be obtained from the Department of Management Information.

First Quarter	Second Quarter
____%	____%

___ ___ ___ ___ ___ ___ ___ COD-17

Massachusetts Statewide Educational Assessment 1977-78

PRINCIPAL QUESTIONNAIRE

Dear Principal:

Please answer the following questions relative to the ELEVENTH GRADE in your school. Thank you very much for your cooperation.

PLEASE RETURN NO LATER THAN MARCH 24, 1978

1. Five objectives in Career and Occupational Development (COD) are listed below. Please order them in terms of the extent to which instruction or guidance is given to students in the grade indicated above. Put a "1" next to the objective which receives the most emphasis, a "5" next to the objective least emphasized, etc. Use each number (1, 2, 3, 4, 5) only once.

COD OBJECTIVE	ORDER
A. knowledge of the characteristics (classifications, major duties, nature of tasks, and salary) of various careers and occupations	____
B. knowledge of the abilities, training, and preparation required or useful for various careers and occupations	____
C. knowledge and ability necessary to plan and implement career decisions	____
D. application of basic skills (numerical, communication, and interpersonal) useful in seeking and retaining employment	____
E. personal attitudes and values contributing to career success	____

2. How satisfied are you with the level of knowledge or skill of students in the above grade relative to these objectives? Check the appropriate box.

OBJECTIVE	SATISFACTION LEVEL			
	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
A. knowledge of the characteristics (classifications, major duties, nature of tasks, and salary) of various careers and occupations	1 ☐	2 ☐	3 ☐	4 ☐
B. knowledge of the abilities, training, and preparation required or useful for various careers and occupations	1 ☐	2 ☐	3 ☐	4 ☐
C. knowledge and ability necessary to plan and implement career decisions	1 ☐	2 ☐	3 ☐	4 ☐
D. application of basic skills (numerical, communication, and interpersonal) useful in seeking and retaining employment	1 ☐	2 ☐	3 ☐	4 ☐
E. personal attitudes and values contributing to career success	1 ☐	2 ☐	3 ☐	4 ☐

3. Indicate the TWO major ways in which the program in career and occupational development in your school could be improved for the grade above. (Check two.)

1 ____ more guidance and/or career counseling personnel

2 ____ more inservice training for guidance personnel regarding career and occupational education

3 ____ more inservice training for teachers regarding career and occupational education

4 ____ more career and occupational education classes

5 ____ more infusion of career and occupational education concepts into curricula of other courses (e.g., mathematics)

6 ____ better career and occupational education instructional materials

7 ____ more innovative career and occupational education learning experiences for students (e.g., career day, shadowing, mock interviews)

8 ____ other; please specify: ______________________________

9 ____ none of the above

4. Do you believe that all students must meet some specified minimum standard of achievement in reading, writing, and mathematics as one requirement for the awarding of the high school diploma?

1 ____ yes

2 ____ no

3 ____ I'm not sure.

5. Which of the following do you believe should be responsible for setting minimal competency standards to be used as a basis for the awarding or denial of the high school diploma? (Check one.)

1 ____ local education agencies

2 ____ State Board of Education

3 ____ Legislature

4 ____ both local education agencies and the State Board of Education

5 ____ other; please specify: ______________________________

6 ____ none of the above

6. Is your school an ESEA Title I school?

1 ____ yes

2 ____ no

7. How would you rate parental support of your school's policies and procedures? Circle one.

Excellent	Good	Average	Fair	Poor
1	2	3	4	5

8. How would you rate the attitudes of the majority of your students toward school and learning? Circle one.

Excellent	Good	Average	Fair	Poor
1	2	3	4	5

9. Please look at page 2 of your School Register. From the Quarterly Reports section, please provide us with the percentage of attendance for the first and second quarters of this year for grade 11 (total of all classes). Note: Principals of Boston schools need not complete this question. Attendance information will be obtained from the Department of Management Information.

First Quarter	Second Quarter
____%	____%

10. To what extent are vocational and occupational education programs (industrial arts, distributive education, health occupations, etc.) available to all students in your school who wish to take them?

1 ____ generally available

2 ____ somewhat available

3 ____ available to a minimum extent

4 ____ not available

APPENDIX D

Identification of Region and Kind of Community for Massachusetts School Districts

Identification of Region* and Kind of Community** for Massachusetts School Districts

School System	Region	KOC
Local Public Schools		
Abington	4	3
Acton	2	3
Acushnet	4	4
Agawam	5	4
Amesbury	2	4
Amherst Union 26	5	3
Andover	2	3
Arlington	1	3
Ashburnham Union 56	6	4
Ashfield Union 65	3	4
Ashland	6	3
Athol	6	4
Attleboro	4	4
Auburn	6	2
Avon	1	3
Ayer	2	4
Barnstable	4	4
Barre Union 63	6	4
Bedford	2	3
Belchertown	5	4
Bellingham	6	4
Belmont	1	3
Berkley Union 37	4	4
Berlin Union 60	6	4
Bernardston Union 18	3	4
Beverly	2	3
Billerica	2	4
Blackstone Union 44	6	4
Bolton Union 47	6	4
Boston	1	1
Bourne Union 10	4	4
Boxborough Union 42	2	4
Boxford Union 58	2	3
Boylston Union 60	6	3
Braintree	1	3
Brewster Union 54	4	4
Bridgewater	4	4
Brimfield Union 61	6	4
Brockton	4	1
Brookfield Union 61	6	4
Brookline	1	3
Burlington	2	3
Cambridge	1	2
Canton	1	3
Carlisle	2	3
Carver Union 62	4	4
Chatham	4	4
Chelmsford	2	3
Chelsea	1	2
Chesterfield Union 66	3	4
Chicopee	5	1
Chilmark Union 19	4	4
Clarksburg Union 43	3	4
Clinton	6	4
Cohasset	1	3
Concord	1	3
Conway Union 38	3	4
Danvers	2	3
Dartmouth	4	4
Dedham	1	3
Deerfield Union 38	3	4
Dennis Union 11	4	4
Dighton Union 37	4	4
Douglas	6	4
Dover Union 50	6	3
Dracut	2	4
Dunstable Union 46	2	4
Duxbury	4	3
East Bridgewater	4	4
East Brookfield Union 7	6	4
Eastham Union 54	4	4
Easthampton	5	2
East Longmeadow	5	3
Easton	4	3
Edgartown Union 19	4	4
Erving Union 28	6	4
Essex Union 48	2	4
Everett	1	2
Fairhaven	4	4
Fall River	4	1
Falmouth	4	4
Fitchburg	6	1
Florida Union 43	3	4
Foxborough	4	3
Framingham	6	3
Franklin	6	4
Freetown Union 34	4	4
Gardner	6	4
Georgetown	2	4
Gill Union 18	3	4
Gloucester	2	4
Goshen Union 66	3	4
Gosnold Union 37	4	4
Grafton	6	3
Granby	5	4
Granville Union 39	3	4
Greenfield	3	4
Groton Union 46	2	3
Groveland Union 53	2	4
Hadley	5	4
Halifax Union 31	4	4
Hamilton Union 57	2	3
Hampden	5	4
Hancock Union 69	3	4
Hanover	4	3
Hanson	4	4
Hardwick Union 63	6	4
Harvard	6	4
Harwich	4	4
Hatfield	5	4
Haverhill	2	1
Hingham	1	3
Holbrook	1	3
Holden Union 64	6	3
Holland Union 61	6	4
Holliston	6	3
Holyoke	5	1
Hopedale	6	4
Hopkinton	6	3
Hubbardston Union 63	6	4
Hudson	6	3
Hull	4	3
Ipswich	2	4
Kingston Union 31	4	4
Lakeville Union 34	4	4
Lancaster	6	4
Lanesborough Union 69	3	4
Lawrence	2	1
Lee Union 29	3	2
Leicester	6	4
Lenox	3	4
Leominster	6	1

* Region Definitions: 1 = Boston Region; 2 = Northeast Region; 3 = Pittsfield Region; 4 = Southeast Region; 5 = Springfield Region; 6 = Central Mass. Region

** KOC Definitions: 1 = Big city; 2 = Industrial suburb, 3 = Residential suburb; 4 = Other

School System	Region	KOC
Leverett Union 28	5	4
Lexington	1	3
Leyden Union 18	3	4
Lincoln	1	3
Littleton	2	3
Longmeadow	5	3
Lowell	2	1
Ludlow	5	4
Lunenburg	6	4
Lynn	2	2
Lynnfield	2	3
Malden	1	2
Manchester Union 48	2	3
Mansfield	4	4
Marblehead	2	3
Marion Union 55	4	4
Marlborough	6	4
Marshfield	4	3
Mashpee Union 10	4	4
Mattapoisett Union 55	4	4
Maynard	2	4
Medfield	6	3
Medford	1	2
Medway	6	4
Melrose	1	3
Merrimac Union 53	2	4
Methuen	2	4
Middleborough	4	4
Middleton	2	3
Milford	6	4
Millbury	6	2
Millis	6	3
Millville Union 44	6	4
Milton	1	3
Monroe Union 43	3	4
Monson	5	2
Montague	3	4
Nahant	2	3
Nantucket	4	4
Natick	6	3
Needham	1	3
New Bedford	4	1
New Braintree Union 12	6	4
Newbury Union 68	2	3
Newburyport	2	4
New Salem Union 28	6	4
Newton	1	3
Norfolk	4	3
North Adams	3	4
Northampton	5	4
North Andover	2	3
North Attleborough	4	4
Northborough Union 3	6	3
Northbridge	6	4
North Brookfield Union	6	4
Northfield Union 18	3	4
North Reading	2	3
Norton	4	4
Norwell	4	3
Norwood	1	3
Oak Bluffs Union 19	4	4
Oakham Union 63	6	4
Orange	6	4
Orleans Union 54	4	4
Otis Union 29	3	4
Oxford	6	4
Palmer	5	4
Paxton Union 64	6	3
Peabody	2	2
Pelham Union 26	5	4
Pembroke Union 3!	4	3
Petersham	6	4
Phillipston Union 1	6	4
Pittsfield	3	1
Plainville	4	4
Plymouth Union 62	4	4
Plympton Union 31	4	4
Princeton Union 64	6	4
Provincetown Union 14	4	4
Quincy	1	2
Randolph	1	3
Raynham	4	3
Reading	2	3
Rehoboth Union 37	4	4
Revere	1	2
Richmond Union 69	3	4
Rochester Union 55	4	4
Rockland	4	3
Rockport	2	3
Rowe Union 65	3	4
Rowley Union 63	2	4
Royalston Union 1	6	4
Rutland Union 64	6	4
Salem	2	2
Salisbury Union 68	2	4
Sandisfield Union 39	3	4
Sandwich Union 10	4	4
Saugus	2	3
Savoy Union 43	3	4
Scituate	4	3
Seekonk	4	3
Sharon	1	3
Sherborn Union 50	6	3
Shirley Union 42	2	4
Shrewsbury	6	3
Shutesbury Union 28	5	4
Somerset	4	4
Somerville	1	2
Southampton Union 66	3	4
Southborough Union 3	6	3
Southbridge	6	4
South Hadley	5	4
Southwick Union 39	3	4
Spencer	6	4
Springfield	5	1
Sterling Union 64	6	4
Stoneham	2	3
Stoughton	4	4
Stow Union 47	6	3
Sturbirdge Union 61	6	3
Sudbury	1	3
Sunderland Union 38	3	4
Sutton	6	4
Swampscott	2	3
Swansea	4	4
Taunton	4	4
Templeton Union 1	6	3
Tewksbury	2	3
Tisbury Union 19	4	4
Topsfield Union 58	2	3
Truro Union 14	4	4
Tyngsborough	2	4
Tyringham Union 29	3	4
Uxbridge	6	4
Wakefield	2	3
Wales Union 61	6	4
Walpole	1	3
Waltham	1	2
Ware	5	4
Wareham	4	4
Warren Union 12	6	2
Warwick Union 18	3	4
Watertown	1	2
Wayland	1	3

School System	Region	KOC	School System	Region	KOC
Webster	6	4	West Springfield	5	4
Wellesley	1	3	West Tisbury Union 19	4	4
Wellfleet Union 54	4	4	Westwood	1	3
Wendell Union 28	6	4	Weymouth	1	3
Wenham Union 57	2	3	Whately Union 38	3	4
Westborough	6	3	Whitman	4	4
West Boylston	6	3	Wilbraham	5	3
West Bridgewater	4	4	Williamsburg Union 66	3	4
West Brookfield Union 12	6	4	Williamstown	3	3
			Wilmington	2	3
Westfield	5	4	Winchendon	6	4
Westford	2	3	Winchester	2	3
Westhampton Union 66	3	4	Winthrop	1	3
Westminster Union 56	6	4	Woburn	2	3
West Newbury Union 53	2	4	Worcester	6	1
Weston	1	3	Wrentham	4	3
Westport	4	4	Yarmouth Union 11	4	4

Academic Regional Schools

Acton-Boxborough	2	3	Gateway	3	4
Adams-Cheshire	3	4	Gill-Montague	3	4
Amherst-Pelham	5	3	Groton-Dunstable	2	3
Ashburnham-Westminster	6	4	Hamilton-Wenham	2	3
Athol-Royalston	6	4	Hampden-Wilbraham	5	3
Berkshire Hills	3	4	Hampshire	3	4
Berlin-Boylston	6	3	Hawlemont	3	4
Blackstone-Millville	6	4	King Philip	4	3
Bridgewater-Raynham	4	4	Lincoln-Sudbury	1	3
Buckland-Shelburne	3	4	Martha's Vineyard	4	4
Central Berkshire	3	3	Masconomet	2	3
Concord-Carlisle	1	3	Mendon-Upton	6	4
Dennis-Yarmouth	4	4	Mount Greylock	3	4
Dighton-Rehoboth	4	4	Mohawk Trail	3	4
Dover-Sherborn	6	3	Narragansett	6	3
Dudley-Charlton	6	4	Nashoba	6	4
Freetown-Lakeville	4	4	Nauset	4	4
Frontier	3	4	New Salem-Wendell	6	4

School System	Region	KOC	School System	Region	KOC
Northboro-Southboro	6	3	Silver Lake	4	3
North Middlesex	2	4	Southern Berkshire	3	4
Old Rochester	4	4	Spencer-East Brookfield	6	4
Pentucket	2	3	Tantasqua	6	4
Pioneer Valley	3	4	Triton	2	4
Plymouth-Carver	4	4	Wachusett	6	3
Quabbin	6	4	Warren-West Brookfield	6	2
Ralph C. Mahar	6	4	Whitman-Hanson	4	4

Vocational-Technical Regional Schools

Assabet Valley	6	3	Northern Berkshire Voc	3	4
Blackstone Valley Reg	6	4	Nashoba Valley Tech	2	3
Blue Hills Voc	1	3	Northeast Metro Voc	2	3
Bristol-Plymouth Voc-Tech	4	4	North Shore Reg Voc	2	3
Cape Cod Reg Voc	4	4	Old Colony Reg Voc	4	4
			Pathfinder Voc-Tech	6	4
Franklin County	3	4	Shawsheen Valley Voc-Tech	2	3
Greater Fall River	4	1	Southeastern	4	1
Greater Lawrence	2	1	South Shore Voc-Tech	4	3
Greater Lowell Voc-Tech	2	4	South Worcester County Voc	6	4
Greater New Bedford Voc-Tech	4	1			
South Middlesex Voc-Tech Reg	6	3	Tri County Reg Voc-Tech	6	4
Minuteman Voc-Tech	2	3	Upper Cape Cod Voc-Tech	4	4
Montachusett Voc-Tech	6	4	Whittier Voc	2	4

APPENDIX E

Copies of All Correspondence with School District Personnel

National Evaluation Systems, Inc.

November 7, 1977

Dear Superintendent:

Enclosed you will find materials describing this year's Statewide Educational Assessment Program and a detailed description of the Local Option component being introduced this year.

The enclosed materials include the following:

- a letter from Acting Commissioner, Michael Daly
- a question-and-answer brochure
- a flyer describing the Local Option, including copies of sample results reports (yellow)
- a district information form (blue) to be completed and returned to NES not later than November 29, 1977
- a Local Option participation form (pink) to be completed and returned to NES not later than November 29, 1977
- a self-addressed postage-paid envelope

If you have any questions regarding the Local Option, please call Dr. Dorit Sejwacz at (413) 549-2846. Thank you in advance for your attention and cooperation.

Regards,

William Phillip Gorth

William Phillip Gorth, Ph.D.
President

WPG/bg
Enclosures

P.O. Box 226,
Amherst, Mass. 01002

East Coast Office
telephone: (413) 549-1011

The Commonwealth of Massachusetts
Department of Education

31 St. James Avenue, Boston, Massachusetts 02116

MEMORANDUM

TO: Superintendent of Schools

FROM: Michael J. Daly
Acting Commissioner of Education

RE: Statewide Educational Assessment Program - 1977-78
Local Option Testing

During the 1977-78 school year the Massachusetts Department of Education will conduct a Statewide Educational Assessment Program in two areas: Reading and Career and Occupational Development. The assessment will provide information about the achievement of 9 and 17 year old Massachusetts students in Reading and that of 13 and 17 year olds in Career and Occupational Development. Test instruments, test administrations, and student sampling will be modeled after procedures used in the 1974-75 statewide assessment and those used by the National Assessment of Educational Progress.

In addition, the Department of Education is implementing a new assessment component this year. In response to the requests of local personnel that information be made available to them for use in local program assessment and planning, a local assessment option will be provided.

Each district may elect to test all age-eligible students or any portion of those students using the test instruments developed for the statewide assessment program. Results of this testing will be reported directly to the district and will not be submitted to the Department of Education. Participation in the local option will be completely voluntary. Districts choosing to participate will contract directly with National Evaluation Systems, Inc. (NES) of Amherst, Massachusetts, the contract agency conducting the 1977-78 assessment program.

Further details regarding procedures and costs of the local option are described in the enclosed materials.

MJD:b
Encl.

Massachusetts Statewide Educational Assessment 1977-78

INFORMATION FLYER

During 1977-78 the Massachusetts Department of Education (MDE) will again conduct a statewide educational assessment. This year the assessment will focus on the following subject areas, each at two different age levels:

- Reading (*9- and *17-year-olds)
- Career and Occupational Development (*13- and *17-year-olds)

Testing will occur during February and March, 1978.

National Evaluation Systems, Inc. (NES) of Amherst, Massachusetts, is under contract to MDE to conduct the assessment. NES will act as the liaison between Massachusetts school systems and MDE and will be responsible for the administration of major assessment activities.

The assessment will be performed in two steps:

- *STEP 1: STATEWIDE TESTING.* A sample of students at each age level will be selected according to a sophisticated sampling plan. Implementation of the sampling plan will determine the individual students to be tested and will ensure the representation of students from all regions and communities of all kinds in the state of Massachusetts. From the performance of each sample, reliable estimates will be made of the performance of all students in the age group.

- *STEP 2: LOCAL ASSESSMENT OPTION.* Local district personnel may elect to test students in their own districts at one or both of the two age levels and in one or both of the subject areas being assessed, using the customized tests designed for Step 1. Local testing will occur simultaneously with statewide testing. Participation in the local option will allow each district to compare the performance of its students in various regions of the state and in various kinds of communities. In addition, on test items drawn from material of the National Assessment of Educational Progress, local districts will be able to make comparisons with results for the nation and the Northeast region of the country. This service must be funded by the district on a per-pupil basis. Each district electing to participate will contract directly with NES.

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* The age definitions are as follows:

9-year-olds — born during 1968
13-year-olds — born during 1964
17-year-olds — born October 1960 through September 1961

The Local Assessment Option

Local districts may elect to test all of their students at either or both of the specified age levels and in either or both of the subject areas. If a district elects to test its students (at either age level or in either subject area), the following services will be provided by NES. For each age level and each subject area:

- training of test coordinators or administrators in test administration procedures at one of two regional workshops
- delivery and pick-up of test booklets
- editing and scoring of tests and data analysis
- complete results reports as described below

Two copies of each results report produced by NES will be provided. The reports are listed below, and samples of each type are enclosed (yellow).

FOR EACH CLASS:

- a Student Objective Achievement Report (see Sample #1)
- a Class Item Analysis Report (see Sample #2)
- a Class Objective Summary Report (see Sample #3)
- a Class Questionnaire Report (see Sample #4)

FOR EACH SCHOOL:

- a School Item Analysis Report (see Sample #2)
- a School Objective Summary Report (see Sample #3)
- a School Questionnaire Report (see Sample #4)

FOR THE DISTRICT:

- a District Item Analysis Report (see Sample #2)
- a District Objective Summary Report (see Sample #3)
- a District Questionnaire Report (see Sample #4)

The cost is $1.85 per student in each subject area at each age level (minimum: $75 per district). In addition, the following ADDITIONAL services are available at the costs listed:

1) assistance in the interpretation of results for one age level in one subject area at a REGIONAL workshop for one or more members of the school district —
$9.00/person

2) conduct of a workshop WITHIN a local school district in the interpretation of the results in one subject area —
$200.00/person

3) development and implementation of local benchmark procedures for each school district (comparison of results with local teacher expectations) —
$200.00/session

4) a written report interpreting the district-wide averages in comparison to the statewide assessment results for one age level in one subject area —
$200.00/report

Enclosed is a Local Option Participation Form (pink) which should be filled out to indicate whether your district plans to participate in the local assessment option. This form must be completed and returned to NES in the self-addressed postage-paid envelope enclosed as soon as possible, but not later than November 29, 1977. Instructions for completing the form are attached to the form. At present you will indicate only whether you wish to participate in the basic option. At a later time we will ask you to indicate whether you wish any of the ADDITIONAL services listed above.

If any schools in your district have been randomly selected for participation in the statewide phase of the assessment program, you will be notified shortly. However, this should present no problem. Detailed procedures have been developed and will be provided to districts participating in both the statewide assessment and the local option. No student will be tested twice. Furthermore, the anonymity of individual students, schools, and districts selected for participation in the statewide assessment will be maintained regardless of whether or not they are participating in the local option.

Also enclosed you will find a District Information Form (blue) which should be returned along with the Local Option Participation Form by November 29, 1977. This form acknowledges your receipt of this mailing and provides NES with the names of district-level personnel who should receive future mailings instead of, or in addition to, yourself. It also contains space for any special instructions or comments you may have regarding contact with your district.

If we can supply any further information, please call us at (413) 549-2846. Thank you in advance for your attention and cooperation.

SAMPLE #1

MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT PROGRAM
(SUBJECT AREA) 1977-78

STUDENT OBJECTIVE ACHIEVEMENT REPORT BY CLASS

GRADE 8
CLASS - 8-2

DISTRICT - HEARTLAND PUBLIC SCHOOLS
SCHOOL - WELLS

14 STUDENTS TOOK THE TEST - FEB/MARCH 1978

PERCENT OF ITEMS ANSWERED CORRECTLY

STUDENT	OBJECTIVE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	...	ALL ITEMS
NAME	NO. OF ITEMS	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	...	66
ABBOT GARY		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
BAKER JOAN		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
BERRY DAVID		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
CANDY ALAN		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
FOLEY BRIAN		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
GORTH CAROL		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
LYLE KATHY		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
LYON SUSAN		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
MASON LISA		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
PHAUP SCOTT		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
ROSE BRUCE		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
SAKS JODI		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
TREME AMY		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
WEBER SCOTT		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x

SAMPLE #2

```
        MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT PROGRAM
                         (SUBJECT AREA) 1977-78

                       CLASS ITEM ANALYSIS REPORT                     PAGE =  1

GRADE 8                                       DISTRICT - HEARTLAND PUBLIC SCHOOLS
CLASS - 8-2                                    SCHOOL  - WELLS

               30 STUDENTS TOOK THE TEST - FEB/MARCH 1978

QUESTION        CORRECT     PERCENT                 DISTRIBUTION OF RESPONSES (%)
POSITION        ANSWER      CORRECT            NR     1     2     3     4     5     6


OBJECTIVE   1     (THE TEXT OF OBJECTIVE 1 WILL BE PRINTED HERE)

    1              1           79               0    79     0     0    19
    6              3           12               6     2    41    12    36
   11              1           92               0    92     3     2     2
   16              3           50               2    15    15    50    16

OBJECTIVE   2     (THE TEXT OF OBJECTIVE 2 WILL BE PRINTED HERE)

    2              3           71               0     6     8    71    11
    7              2           80               0    15    80     2     1
   12              2           27               6    24    27    18    23
   17              3           32               6    25    19    32    16

OBJECTIVE   3     (THE TEXT OF OBJECTIVE 3 WILL BE PRINTED HERE)

    3              3           66               3    17     5    66     6
    8              3           82               0     8     6    82     2
   13              4           70               3     2    14     7    70
   18            20.00         42


NOTE:  DATA ARE PROVIDED FOR EACH OF THE OBJECTIVES.  A SIMILAR REPORT IS PROVIDED FOR
       DISTRICT-WIDE AND SCHOOL-WIDE RESULTS.
```

SAMPLE #3

MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT PROGRAM
(SUBJECT AREA) 1977-78

CLASS OBJECTIVE SUMMARY REPORT

GRADE 8
CLASS - 8-2

DISTRICT - HEARTLAND PUBLIC SCHOOLS
SCHOOL - WELLS

24 STUDENTS TOOK THE TEST - FEB/MARCH 1978

	OBJECTIVE	NUMBER OF ITEMS	AVG NUMBER CORRECT	AVG PERCENT CORRECT
1	(THE TEXT OF OBJECTIVE 1 WILL BE PRINTED HERE)	4	1.8	44
2	(THE TEXT OF OBJECTIVE 2 WILL BE PRINTED HERE)	4	2.3	57
3	(THE TEXT OF OBJECTIVE 3 WILL BE PRINTED HERE)	4	3.7	92
4	(THE TEXT OF OBJECTIVE 4 WILL BE PRINTED HERE)	4	3.6	90
5	(THE TEXT OF OBJECTIVE 5 WILL BE PRINTED HERE)	4	3.2	80
6	(THE TEXT OF OBJECTIVE 6 WILL BE PRINTED HERE)	4	2.7	68
7	(THE TEXT OF OBJECTIVE 7 WILL BE PRINTED HERE)	4	2.2	54
8	(THE TEXT OF OBJECTIVE 8 WILL BE PRINTED HERE)	4	3.6	90
⋮	⋮			

TOTAL TEST SCORES

AVERAGE NUMBER CORRECT = 44.7   STANDARD DEVIATION = 7.5   AVERAGE PERCENT CORRECT = 68

NOTE: DATA ARE PROVIDED FOR EACH OF THE OBJECTIVES. A SIMILAR REPORT IS PROVIDED FOR SCHOOL-WIDE AND DISTRICT-WIDE RESULTS.

SAMPLE #4

MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT PROGRAM
(SUBJECT AREA) 1977-78

CLASS QUESTIONNAIRE REPORT

GRADE 8
CLASS - 8-2

DISTRICT - HEARTLAND PUBLIC SCHOOLS
SCHOOL - WELLS

24 STUDENTS TOOK THE TEST - FEB/MARCH 1978

	NUMBER OF STUDENTS	PERCENT OF STUDENTS
WHAT SEX ARE YOU?		
1. MALE	8	33
2. FEMALE	16	67
CONSIDER THE COURSES YOU ARE TAKING THIS YEAR, WOULD YOU SAY YOU ARE:		
1. IN THE GENERAL PROGRAM	9	37
2. IN THE VOCATIONAL PROGRAM	3	13
3. IN THE COLLEGE-BOUND PROGRAM	10	42
4. IN SOME OTHER SPECIAL PROGRAM	2	8
5. DON'T KNOW	0	0
HOW MANY TIMES IN THE LAST 12 MONTHS HAVE YOU DISCUSSED CAREER PLANS WITH THE GUIDANCE COUNSELOR IN YOUR SCHOOL?		
1. NONE	4	17
2. ONCE OR TWICE	8	33
3. THREE TIMES OR MORE	8	33
4. THERE IS NO GUIDANCE COUNSELOR	4	17

NOTE: THE QUESTIONS FOR THE STUDENT QUESTIONNAIRE HAVE NOT YET BEEN SELECTED. THOSE GIVEN ABOVE ARE EXAMPLES OF THE TYPE OF QUESTIONS ASKED IN THE 1974-75 MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT. A SIMILAR REPORT IS PROVIDED FOR SCHOOL-WIDE AND DISTRICT-WIDE RESULTS.

Massachusetts Statewide Educational Assessment 1977-78

INSTRUCTIONS FOR COMPLETING THE LOCAL OPTION PARTICIPATION FORM

Please check the appropriate box to indicate whether or not your district will participate in the local option. Whether or not you plan to participate, complete the reverse side of the form, and mail the signed form back to National Evaluation Systems (NES). If you do plan to participate, please complete the table on the form as follows:

1. Number of Students to be Tested

You may choose to test students in your district in either one or both of the subject areas. In each subject area, you may choose to test students at either one or both of the age levels listed on the attached form.

You will be charged $1.85/student for the total number of students that you list on the attached form.

On each of the four lines, write your estimate of the number of students that will be tested. If you do not wish to test in a particular subject area at a particular age level, write "0" on that line.

2. Student Selection

For the statewide assessment, all age-eligible students (regardless of what grade they are in) have a chance of being selected to participate. In order to be able to make direct comparisons between your results and those of the statewide assessment, we recommend that you also use the same procedures for selecting students to be tested in your district. Check column 2 beside any subject area/age level in which you are planning to use this procedure for selecting students to be tested.

However, you may decide for practical reasons to test only age-eligible students within a particular grade.

That is, 9-year-olds in grade 4
13-year-olds in grade 8
and/or 17-year-olds in grade 11.

Should you choose to do this, please be aware that comparisons between your results and those of the statewide assessment will not be as accurate, since not all age-eligible students in the statewide sample are in the above listed grades. Check column 3 beside any subject area/age level in which you are planning to use this procedure for selecting students to be tested.

A third alternative for selecting students to be tested is simply to choose to test only students in the fourth and/or eighth and/or eleventh grade regardless of their ages. However, please be advised that this procedure is the least meaningful of the three procedures in terms of comparisons of local results with statewide results. Check column 4 beside any subject area/age level in which you are planning to use this procedure for selecting students to be tested.

3. Testing All or a Portion of the Eligible Students

Regardless of which procedure you choose for selecting students, you may test either all eligible students or some portion of the students. If your purpose is diagnostic, we recommend that you test all eligible students. If your purpose is to evaluate a particular program, you may wish to test only a sample of your students.

Beside each subject area and age level in which you wish to test, check column 5 (if you will be testing all eligible students) or column 6 (if you will be testing only some portion of the eligible students).

CALL DORIT SEJWACZ AT (413) 549-2846 IF YOU HAVE QUESTIONS.

FOR YOUR INFORMATION

When we receive your completed participation form, NES will contact you to:

1) confirm your participation
2) provide you with details of the local testing program (e.g., exact testing dates)
3) find out whether you wish to purchase any of the ADDITIONAL services

Massachusetts Statewide Educational Assessment 1977-78

LOCAL OPTION PARTICIPATION FORM

Return no later than November 29, 1977

Will your school district participate in some part of the local assessment program?

☐ yes ☐ no

If YES, please complete the table below. Read the attached directions before completing the form.

		PROCEDURE FOR STUDENT SELECTION			ALL OR A PORTION OF STUDENTS	
Subject Area/ Age Level	Number of Students to be Tested $ 1.85/student $75.00 minimum	(2) Age-Eligible Regardless of Grade	(3) Age-Eligible Within Grade	(4) Within Grade Regardless of Age	(5) All Students	(6) Portion of Students
READING						
9-year-olds	________	☐	☐	☐	☐	☐
17-year-olds	________	☐	☐	☐	☐	☐
COD						
13-year-olds	________	☐	☐	☐	☐	☐
17-year-olds	________	☐	☐	☐	☐	☐

SEE OTHER SIDE

Test materials should be sent to:

Name: ____

District: ____

Address: ____

THIS DOCUMENT SERVES AS A LEGALLY-BINDING PURCHASE ORDER. PLEASE BE SURE THAT IT IS SIGNED BY AN AUTHORIZED INDIVIDUAL. Billing will follow delivery of all services.

Signature: ____

Name (please print or type): ______________________________

Title (please print or type): ______________________________

To facilitate state effectiveness in planning future local assessment options, it would be helpful if you would provide the following information. This information is VOLUNTARY. The anonymity of those individuals who choose to respond will be protected. All information will be presented on a statewide basis only.

If your district IS participating in the local option, please indicate why. Circle the number or numbers that apply.

1. comparison of local assessment results with statewide results
2. curriculum planning
3. curriculum evaluation
4. project evaluations
5. diagnosis of skill of individual students
6. other: ____

If your district is NOT participating in the local option, please indicate why. Circle the number or numbers that apply.

1. budget constraints
2. short timeline for decision-making
3. statewide testing duplicates existing local assessment testing program
4. assessment tests are irrelevant to local programming efforts
5. insufficient information available to make decision (e.g., tests not available for preview)
6. other: ____

Return this completed form to: NATIONAL EVALUATION SYSTEMS, INC.
Post Office Box 226
Amherst, Massachusetts 01002

Massachusetts Statewide Educational Assessment 1977-78

DISTRICT INFORMATION FORM

RETURN NO LATER THAN NOVEMBER 29, 1977.

- Are you the person to whom future mailings should be sent?

☐ yes ☐ no

If NO, please list the name, title and address of the district-level person, other than yourself, whom you designate to handle matters related to the 1977-78 assessment (i.e., to serve as a liaison between NES and local school personnel). *THIS PERSON WILL RECEIVE ALL FUTURE CORRESPONDENCE RELATED TO THE ASSESSMENT. YOU PERSONALLY WILL RECEIVE NO FURTHER CORRESPONDENCE FROM NES.* Please give the materials from this mailing to the person listed below.

Name: ______________________________

Title: ______________________________

Address: ______________________________

____

- If the above-named person is NOT the district testing coordinator, should copies of relevant mailings be sent to the testing coordinator as well?

☐ yes ☐ no

If YES, please give the name, title and address of the testing coordinator below.

Name: ______________________________

Title: ______________________________

Address: ______________________________

____

- Special Instructions or Comments: ______________________________

____

National Evaluation Systems, Inc.

November 9, 1977

Dear Superintendent:

As you are probably aware by now, the Massachusetts Department of Education is currently implementing the 1977-78 Statewide Educational Assessment Program. The subject areas being assessed this year are reading, and career and occupational development. A statewide sample of approximately 2,200 9-year-olds and 2,200 17-year-olds will be tested in reading, and a sample of approximately 2,200 13-year-olds and 2,700 17-year-olds will be tested in career and occupational development. A more detailed description of the program was sent to you in an earlier mailing.

The purpose of this mailing is to advise you of the schools in your district which have been randomly selected to participate in the statewide phase of the assessment. A form listing these schools is enclosed. Also enclosed is a memorandum from the Commissioner of Education urging your cooperation in the assessment activities.

The principal of each school selected to participate will receive a letter explaining the testing program. Each principal will be asked to forward a roster of all 9-, 13-, and/or 17-year-olds enrolled in his/her school, due in our office no later than December 5, 1977. From these rosters we will select a sample of students to be tested in each school. Anonymity for all students and schools is guaranteed. Approximately one hour will be required for each test, including the administration of a student questionnaire. The testing period will be January 31 through March 31, 1978.

National Evaluation Systems (NES) is the contract agency responsible for implementing the statewide assessment in Massachusetts. We will be working closely with all school personnel involved in assessment activities.

If you have any questions or concerns about the program in general or about your district in particular, please feel free to call us collect (413-549-2846). Thank you for your cooperation.

Regards,

Dorit Sejwacz

Dorit Sejwacz, Ph.D.
Project Manager

DS/pk
Enclosure

P.O. Box 226,
Amherst, Mass. 01002

NES

East Coast Office
telephone: (413) 549-1011

The Commonwealth of Massachusetts
Department of Education

31 St. James Avenue, Boston, Massachusetts 02116

MEMORANDUM

TO: Superintendent of Schools

FROM: Michael J. Daly M.J.D.
Acting Commissioner of Education

RE: Statewide Educational Assessment Program 1977-78

For the fourth consecutive year, the Massachusetts Department of Education is conducting a statewide educational assessment program. This year the assessment will focus on the subject areas of Reading and Career and Occupational Development.

Procedures employed in the Assessment will be similar to those used in previous assessments as well as those used by the National Assessment of Educational Progress. Currently, with the help of teachers and curriculum specialists from across Massachusetts, tests are being constructed to assess the competency of 9, 13 and 17 year old students in the above areas. In addition, the sample for the 1977-78 assessment has been drawn.

Your school district was randomly selected as part of this sample. As in earlier phases of the program the results of the assessment will not be reported at the district, school or student level. If individual districts wish to obtain results for themselves on their own age-eligible students, they may participate in the local option testing described in a previous mailing to you.

The Department of Education has contracted with National Evaluation Systems, Inc. (NES) to administer this year's tests. NES personnel will, over the next several months, be contacting schools drawn in the sample, selecting students to be tested, scheduling testing periods, and supervising test administration. Specifically, NES personnel will be contacting the school (s) in your district listed in the enclosed materials to begin arrangements for testing. Further details describing this year's assessment and your district's participation are given in these materials.

Superintendent of Schools

It is my hope that the tremendous amount of cooperation provided by the schools in Massachusetts during the past three years will continue, and that the information obtained from the assessment will prove to be even more useful to all of us in improving the education of all students. May I again, therefore, solicit your help.

Should you have any questions, please feel free to contact either Dr. Allan S. Hartman or Mr. Matthew Towle of the Bureau of Research and Assessment at 617/727-8497.

Thank you.

MJD:b

National Evaluation Systems, Inc.

November 21, 1977

Dear Principal:

As you are probably aware by now, the Massachusetts Department of Education is currently implementing the 1977-78 Statewide Educational Assessment Program. The subject areas being assessed this year are Reading, and Career and Occupational Development (COD). A Question-and-Answer Brochure describing the program in more detail is enclosed. Also enclosed is a memorandum from Dr. Allan Hartman, Director of the Bureau of Research and Assessment in the Department of Education, urging your cooperation.

National Evaluation Systems, Inc. (NES) is the contract agency responsible for the administration of major assessment activities. Since we will be working together to ensure the success of this phase, we would like you to have a thorough understanding of the activities which will occur over the next few months. The remainder of this letter contains a description of these activities and the responsibility that you can assume to expedite the testing.

Through a random sampling process, your school has been selected to participate in this year's program, and your superintendent has already been notified. The program involves the testing of three age levels: 9-, 13-, and 17-year-olds. The particular activities in *your* school will involve testing a *sample* of students at the following age level(s) during the following time periods:

( ) 9-year-olds during the month of February

( ) 13-year-olds during the first two weeks of February

( ) 17-year-olds during the month of March

Nine- and 17-year-olds will be tested in Reading, and 13- and 17-year-olds will be tested in COD.

Description of Activities

During the testing periods listed above, a sample of approximately 2,200 9-year-olds and 2,200 17-year-olds will be tested in Reading, and a sample of approximately 2,200 13-year-olds and 2,700 17-year-olds will be tested in COD. No 17-year-old will be tested in both subject areas. All students will be asked to complete a student demographic questionnaire.

P.O. Box 226,
Amherst, Mass. 01002

NES

East Coast Office
telephone: (413) 548-1011

Approximately one hour and 15 minutes will be required for each test, including the administration of a student questionnaire. This time does NOT include time required for assembling students and distributing testing materials. Anonymity for all participating students, schools, and districts is guaranteed.

Students will be tested in groups of 25. Because a sample of students will be drawn at random, rather than tested in intact classes, a special room must be set aside for test administration purposes in each school. The test administrator assigned to your school will contact you by telephone during the month of January to schedule a time for testing. The testing periods for each age level are listed above. It would be very helpful if you could in the interim consider the activities in your school during the applicable testing periods and prepare to discuss with us the testing times that would be most convenient for you. We will do everything in our power to be totally responsible for testing: one of our administrators will arrive with all necessary materials and will conduct the tests. Following are your responsibilities relative to the testing.

Your Responsibilities

1. Send to us as soon as possible, but postmarked *no later than* December 5, 1977, a roster of all students enrolled in your school in the following age levels:

   ( ) 9-year-olds—born during 1968
   ( ) 13-year-olds—born during 1964
   ( ) 17-year-olds—born during October, 1960 - September, 1961

   If more than one age level is indicated, please be sure to submit a *separate* roster for each age level and label each roster clearly. All students born in the period(s) shown above *must* be shown on your roster.

2. If you have been asked to submit a roster of 17-year-old students and your school is an ACADEMIC REGIONAL SCHOOL, you must indicate which of the students are enrolled in vocational programs. On your roster, place a "V" beside the name of each student whom you report on your Federal Reporting Form as being enrolled in a vocational education program.

3. Note on your roster any student who should NOT be tested based on the following NAEP guideline adopted by the Massachusetts Department of Education:

> Students who are non-English-speaking or who are handicapped (physically, mentally, or emotionally) in such a way that they could not respond to the test should NOT be tested.

Once your rosters have been drawn up, place an *asterisk* (*) beside the names of those students who, according to the above guideline, should not be tested.

Activities in Your School

During the next few weeks, we will be using the rosters to sample students from each school. From your school, we will be selecting the following:

_____ 9-year-olds requiring → _____ separate test administration(s) in Reading

_____ 17-year-olds requiring → _____ separate test administration(s) in Reading

_____ 13-year-olds requiring → _____ separate test administration(s) in COD

_____ 17-year-olds requiring → _____ separate test administration(s) in COD

Therefore, we will be conducting a total of _____ test administration(s) in your school. If the number of students required for any age level exceeds the number of students on your roster, all of the students on the roster (with the exception of those excluded by the guideline) will be tested. As soon as we receive the materials and complete the sampling process, we will return a list of the selected students to you.

Summary

In summary, we request that you forward in the enclosed self-addressed, stamped envelope:

(1) the completed roster(s) for the indicated age level(s) with notations for students who should be excluded and, if applicable, notations for students enrolled in vocational-education programs

(2) the completed reply form acknowledging your receipt of this letter

Please feel free to call us collect at NES (413-549-2846) if you have immediate concerns. At the Department, the contact person is Mr. Matthew Towle (617-727-8497). Thank you in advance for your continuing attention and cooperation.

Sincerely,

Dorit Sejwacz

Dorit Sejwacz, Ph.D.
Project Manager

DS/bg
Enclosures

The Commonwealth of Massachusetts
Department of Education

31 St. James Avenue, Boston, Massachusetts 02116

MEMORANDUM

TO: Statewide Assessment Sample: Elementary and Secondary School Principals

FROM: Allan S. Hartman, Director
Bureau of Research and Assessment

RE: 1977-78 Statewide Educational Assessment Program Procedures

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Phase III of the Massachusetts Statewide Educational Assessment Program has recently been completed. Results from this phase in the areas of consumer education, science, ecology and school climate have been mailed to all school districts. Should you want to know more about these studies please contact your nearest regional office.

In May, 1977, the State Board of Education selected two major learning areas for Phase IV of the Statewide Educational Assessment Program: Reading and Career and Occupational Development.

With the assistance of teachers and curriculum specialists from across the Commonwealth we have been developing appropriate tests for these areas. In preparation for administering these tests, we recently drew the sample upon which this year's assessment will be based.

Your school was randomly selected as part of this sample. Your superintendent has been notified of your school's selection in the assessment sample. As in earlier phases of the assessment, the test results will not be reported at the district, school or student level.

We have contracted with National Evaluation Systems, Inc. (NES) to administer the testing program. In the next few weeks one of NES's field administrators will contact you to review the details of the assessment program and your participation. Enclosed is information describing this year's assessment and your school's involvement in the program.

The cooperation of school principals has been and will continue to be vital to the assessment program. In turn, I look forward to making the assessment program even more meaningful to the work of Massachusetts schools. May I, therefore, ask for your continued help?

Thank you.

ASH:b
Encl.

National Evaluation Systems, Inc.

December 9, 1977

Dear Educator:

I am writing to verify your district's participation status in the Local Assessment Option of the Massachusetts Statewide Educational Assessment Program 1977-78.

Enclosed you will find a yellow form ("Verification of Local Option Participation") describing your participation in the Local Option according to our records. Please carefully review the figures entered in order to confirm our records.

If you find any errors, please let us know immediately (not later than *December 16, 1977*) by calling us at 413-549-2846. Since the tests must go to the printer on December 19, we must have an accurate count of the number of test booklets needed at each age level in each subject area being tested.

If you find the information on the enclosed yellow form accurate, no further action is necessary on your part at this point in time.

In the near future we will contact you to inform you about testing procedures. Please call us at the above number if you have any immediate questions or problems.

Thank you for your time.

Regards,

Dorit Sejwacz

Dorit Sejwacz, Ph.D.
Project Manager

DS/gf
Enclosure

P.O. Box 226,
Amherst, Mass. 01002

East Coast Office
telephone: (413) 549-1011

National Evaluation Systems, Inc.

January 9, 1978

Dear Principal:

This letter is intended to provide you with three important pieces of information relative to the Massachusetts Statewide Educational Assessment Program 1977-78.

FIRST, we have enclosed one or more lists of students from your school who have been randomly selected to participate in testing activities. Each list of 25 or fewer students represents one testing session. The subject area and age level being tested are indicated at the top of each roster.

SECOND, please note the following guideline for determining whether or not individual students are eligible for testing:

> *Students who are non-English-speaking or who are handicapped (physically, mentally, or emotionally) in such a way that they could not respond to the test should NOT be tested.*

This guideline is used by National Assessment of Educational Progress and has been adopted by the Massachusetts Department of Education for this year's statewide assessment. Please examine your list(s) of selected students to insure eligibility. If there are students on your list(s) who should not be tested according to the guideline above, please call us immediately for replacements.

THIRD, the test administrator assigned to your school will contact you during January or early February to schedule the testing session(s). Inclusive testing dates are listed below:

- All 9-year-olds will be tested during the period January 30 through February 28, 1978.
- All 13-year-olds will be tested during the period January 30 through February 14, 1978.
- All 17-year-olds will be tested during the period March 1 through March 31, 1978.

Please consider activities scheduled in your school during the applicable testing periods. You can facilitate testing coordination by suggesting testing dates and times which would be most convenient for you. Your test administrator will be glad to answer any questions and to assist you in preparing for test administration.

Please feel free to call us at (413) 256-0444 if you have any immediate concerns. Thank you for your attention and cooperation.

Sincerely,

Dorit Sejwacz

Dorit Sejwacz, Ph.D.
Project Manager

Mailing Address:
Post Office Box 226
Amherst, Mass. 01002

30 Gatehouse Road,
Amherst, Mass. 01002
Telephone: (413)256-0444

The Commonwealth of Massachusetts
Department of Education

31 St. James Avenue, Boston, Massachusetts 02116

MEMORANDUM

TO: Participating Principals in Statewide Educational Assessment Program

FROM: Allan S. Hartman, Director
Bureau of Research and Assessment

RE: Enclosed Questionnaire

Your school, as you know, is participating in this year's Statewide Educational Assessment of Reading or Career and Occupational Development. In fact, by now the assessment of the student sample in your building may have already been completed. If not, it will be completed before the end of March.

To help make the statewide reporting of the results more meaningful, we are asking for your help. Specifically, we are asking principals to complete the enclosed questionnaire and return it in the self-addressed, stamped envelope no later than March 24, 1978 to National Evaluation Systems, Inc. (NES).

Please feel free to consult with teachers and others in completing the questionnaire. As you can see we want, more than in any previous assessment, to get into some of the instructional implications and needs related to student performance. The time you can give in completing the questionnaire will be more than repaid in more meaningful and useful assessment reports.

More than one questionnaire may be included if tests are being conducted in your school in both subject areas or at two age levels. Please take the time to fill out both questionnaires, since each should be completed with regard to a specific grade level in a particular subject area.

As always, your responses will not be reported in any way that would identify either you or your school. In short, anonymity is guaranteed.

Let me thank you beforehand for your cooperation. I realize filling in questionnaires is not exactly a priority, so your response will be even more appreciated under the circumstances.

ASH/brh
Enclosure

APPENDIX F

NAEP Comparative Achievement Scores for the Nation and the Northeast

KEY FOR APPENDIX F

The following tables provide the following information for NAEP item scores for students in Massachusetts, the Nation, and the Northeast. ITEM NO. gives the 1977-78 Massachusetts test item number or the corresponding NAEP item number. The P-VALUE is the estimated average percentage of test items answered correctly by students in each population. SE is the standard error of measurement of the p-value. DIFFERENCE is the numerical difference between the p-value for Massachusetts and either the national or Northeast p-value. A minus sign preceding the difference score indicates that students in Massachusetts scored lower than those in the Nation or Northeast. An asterisk (*) preceding the difference score indicates that it is statistically significant (by t-test at the .05 level of confidence).

MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT 1977-78
CAREER AND OCCUPATIONAL DEVELOPMENT—13-YEAR-OLDS
NATIONAL AND NORTHEAST COMPARISONS

Massachusetts Results			National Assessment of Educational Progress						
			National Results				Northeast Results		
Item No.	P-Value	SE		P-Value	SE	Difference	P-Value	SE	Difference
Objective 1									
00005	11.2	1.0	102011B	3.3	.5	* 7.9	4.3	1.1	* 6.9
00006	71.2	1.3	102011C	45.0	1.5	* 26.2	53.0	3.1	* 18.2
00007	51.5	1.4	102011D	50.8	1.3	.7	59.7	2.5	* -8.2
00008	56.2	1.2	102036A	36.6	1.5	* 19.6	44.0	3.1	* 12.2
00009	46.1	1.1	102036D	50.3	1.4	* -4.2	54.3	2.1	* -8.2
00010	82.4	.9	102013A	85.7	.8	* -3.3	86.0	1.8	-3.6
Objective 2									
00011	87.3	.8	102013D	84.2	.9	* 3.1	85.9	1.8	1.4
00012	85.7	.9	102013H	86.0	1.0	-.3	89.8	1.6	* -4.1
00013	92.4	.6	102013I	93.7	.6	-1.3	94.0	.9	-1.6
Objective 3									
00004	41.2	1.9	104009	58.9	1.5	*-17.7	63.4	3.0	*-22.2
00026	48.1	1.6	104011	32.4	1.5	* 15.7	42.0	3.3	6.1

MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT 1977-78
CAREER AND OCCUPATIONAL DEVELOPMENT—13-YEAR-OLDS
NATIONAL AND NORTHEAST COMPARISONS
(continued)

Massachusetts Results			National Assessment of Educational Progress						
			National Results				Northeast Results		
Item No.	P-Value	SE	Item No.	P-Value	SE	Difference	P-Value	SE	Difference
Objective 4									
00078	90.8	.8	301005A	94.6	.8	* -3.8	96.5	1.0	* -5.7
00079	74.9	1.3	301005B	80.3	1.4	* -5.4	83.4	2.2	* -8.5
00080	21.2	1.1	301005C	35.2	1.6	*-14.0	40.1	3.6	*-18.9
00083	23.4	1.4	301010C	26.8	1.6	-3.4	34.2	3.8	*-10.8
0089A	91.0	.9	302015P	93.6	.5	* -2.6	92.5	1.2	-1.5
0089B	91.2	.9	302015S	92.3	.6	-1.1	92.8	1.2	-1.6
0089C	91.4	.9	302015T	92.2	.6	-.8	92.3	1.3	-.9
0089D	94.0	.9	302015N	94.6	.5	-.6	95.1	[illegible]	-1.1
0089E	94.1	.8	302015A	93.2	.5	.9	94.6	1.0	-.5
0089F	93.8	.8	302015C	92.5	.6	1.3	93.4	1.2	.4
00090	78.5	1.3	301019	66.6	1.7	* 11.9	69.5	4.4	* 9.0
81/82	48.6	1.8	301010	53.2	1.9	-4.6	61.7	3.2	*-13.1
Objective 5									
00025	30.0	1.3	401003	22.7	1.0	* 7.3	23.1	1.6	* 6.9
00091	73.3	1.2	401009A	71.7	1.2	1.6	71.9	2.7	1.4

MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT 1977-78
CAREER AND OCCUPATIONAL DEVELOPMENT—17-YEAR-OLDS
NATIONAL AND NORTHEAST COMPARISONS

Massachusetts Results			National Assessment of Educational Progress						
			National Results				Northeast Results		
Item No.	P-Value	SE	Item No.	P-Value	SE	Difference	P-Value	SE	Difference
Objective 1									
00005	26.3	1.6	102011B	19.2	1.5	* 7.1	20.7	2.7	5.6
00006	80.0	1.4	102011C	67.5	1.6	* 12.5	71.8	3.6	* 8.2
00007	67.9	1.3	102011D	79.1	1.3	*-11.2	80.9	3.2	*-13.0
00008	80.9	1.1	102036A	66.9	1.4	* 14.0	74.5	3.2	6.4
00009	58.4	1.3	102036D	69.6	1.4	*-11.2	72.0	2.5	*-13.6
00010	86.9	.8	102013A	90.3	.8	* -3.4	91.2	1.8	* -4.3
Objective 2									
00011	91.8	.8	102013D	93.0	.6	-1.2	91.5	1.5	.3
00012	94.2	.6	102013H	94.6	.6	-.4	95.1	1.2	-.9
00013	95.7	.5	102013T	96.3	.4	-.6	95.5	1.1	.2
00036	75.4	1.3	102018A	64.3	1.5	* 11.1	69.7	2.5	* 5.7
00037	79.2	1.2	102018B	81.3	1.1	-2.1	82.8	2.2	-3.6
00038	61.9	1.3	102018C	59.2	1.4	2.7	63.2	3.0	-1.3
Objective 3									
0004	63.4	1.8	014009	84.9	1.1	*-21.5	87.0	2.1	*-23.6
0026	65.1	1.8	104011	56.4	1.7	* 8.7	58.9	3.5	6.2

MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT 1977-78
CAREER AND OCCUPATIONAL DEVELOPMENT—17-YEAR-OLDS
NATIONAL AND NORTHEAST COMPARISONS
(continued)

Massachusetts Results			National Assessment of Educational Programs						
			National Results				Northeast Results		
Item No.	P-Value	SE	Item No.	P-Value	SE	Difference	P-Value	SE	Difference
Objective 4									
00078	94.3	.7	301005A	97.4	.4	* -3.1	97.2	.7	* -2.9
00079	80.9	1.2	301005B	89.0	.8	* -8.1	89.5	1.5	* -8.6
00080	34.2	1.2	301005C	55.1	1.4	*-20.9	52.4	3.0	*-18.2
00083	35.3	1.6	301010C	49.2	1.6	*-13.9	49.3	3.6	*-14.0
00090	90.6	1.3	301019	87.2	1.3	3.4	86.9	2.7	3.7
00093	69.1	1.8	401010	78.9	1.1	* -9.8	78.4	2.3	* -9.3
81082	76.8	1.6	30101	84.0	1.1	* -7.2	86.8	2.0	*-10.0
Objective 5									
00091	82.9	1.2	401009A	82.6	1.2	.3	82.8	2.3	.1

APPENDIX G

Massachusetts Achievement Results by Reporting Groups on Total Test and Each Objective

KEY FOR APPENDIX G

The analysis by reporting groups provides the following information for the total test and each objective. The P-VALUE is the estimated average percentage of test items answered correctly by students in the population or in the particular reporting group. SE OF P-VALUE is the standard error of measurement for the p-value. GROUP EFFECT is the difference between the state average (all students) and that for the reporting group. An asterisk (*) means that the group effect (the difference) is significant at the 95% confidence level. SE OF EFFECT is the standard error of measurement of the group effect. SAMPLE SIZE is the actual number of students in the reporting group who took the test.

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                        NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                      MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

                              TOTAL TEST SCORE
                                                                                                                 P-VALUE
              SE OF      GROUP     SE OF   SAMPLE                                       0   10   20   30   40   50   60   70   80   90   100
P-VALUE     P-VALUE     EFFECT    EFFECT     SIZE                 REPORTING GROUP       |....|....|....|....|....|....|....|....|....|....|
                                                                                       |                              |                  |
  61.84        0.52                          2238                 ALL STUDENTS         ********************************                  |
                                                                                       |                              |                  |
----SEX OF THE STUDENT                                ----                             |                              |                  |
  60.78        0.63      -1.06*      0.30    1044                 MALE                 *******************************|                  |
  62.83        0.56       0.96*      0.27    1191                 FEMALE               ********************************                  |
                                                                                       |                              |                  |
----GRADE OF THE STUDENT                              ----                             |                              |                  |
  41.69        2.29     -20.15*      2.30      14                 6TH GRADE            **********************         |                  |
  54.66        0.69      -7.19*      0.80     291                 7TH GRADE            ****************************   |                  |
  63.08        0.49       1.23*      0.18    1920                 8TH GRADE            *********************************                 |
  69.96        4.07       8.12*      4.08       9                 9TH GRADE            ************************************              |
  71.00        0.00       9.16*      0.52       1                 10TH GRADE           ************************************              |
                                                                                       |                              |                  |
----HOW DO YOU FEEL ABOUT SCHOOL?                     ----                             |                              |                  |
  57.34        1.06      -4.50*      0.97     104                 STRONGLY DISLIKE     ******************************|                   |
  58.80        0.68      -3.04*      0.53     307                 DISLIKE              ******************************|                   |
  61.18        0.57      -0.66*      0.29     882                 SCHOOL IS OK         ********************************                  |
  64.39        0.56       2.55*      0.29     840                 LIKE                 *********************************                 |
  61.12        1.93      -0.72       1.61     103                 STRONGLY LIKE        ********************************                  |
                                                                                       |                              |                  |
----HOMEWORK - DRILL WORK                             ----                             |                              |                  |
  63.46        0.55       1.62*      0.25    1181                 DAILY                *********************************                 |
  60.22        0.59      -1.63*      0.35     768                 WEEKLY               *******************************|                  |
  59.68        0.92      -2.16*      0.72     278                 MONTHLY              *******************************|                  |
                                                                                       |                              |                  |
----HOMEWORK - READING ASSIGNED MATERIAL              ----                             |                              |                  |
  62.88        0.77       1.04*      0.50     436                 DAILY                ********************************                  |
  62.55        0.62       0.71*      0.30     919                 WEEKLY               ********************************                  |
  60.75        0.52      -1.09*      0.30     873                 MONTHLY              *******************************|                  |
                                                                                       |                              |                  |
----HOMEWORK - WRITING ON ASSIGNED TOPICS             ----                             |                              |                  |
  58.74        1.97      -3.10       1.76      79                 DAILY                ******************************|                   |
  62.21        0.83       0.37       0.50     504                 WEEKLY               ********************************                  |
  61.92        0.47       0.07       0.19    1647                 MONTHLY              ********************************                  |
                    NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                  MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT CUD 13 YEAR OLDS  SPRING 1978

                         TOTAL TEST SCORE

             SE OF      GROUP      SE OF    SAMPLE
P-VALUE    P-VALUE     EFFECT     EFFECT     SIZE                REPORTING GROUP

 61.84       0.52                            2236                ALL STUDENTS

----ARE FIELD TRIPS USEFUL?                                ----
 62.01       0.52       0.17*      0.08      1982                YES
 60.92       0.86      -0.93       0.68       227                NO
 59.23       2.14      -2.64       2.09        27                NEVER GONE

----SCHOOLING HELPS YOU THINK ABOUT WORK?                  ----
 61.43       0.67      -0.41       0.49       348                NOT VERY USEFUL
 63.23       0.44       1.39*      0.26      1162                SOMEWHAT USEFUL
 61.24       0.83      -0.60       0.45       520                VERY USEFUL
 56.42       1.09      -5.42*      0.82       205                I DON'T KNOW

----HOW MUCH ARE YOUR PARENTS INVOLVED?                    ----
 59.35       0.84      -2.49*      0.70       247                HARDLY AT ALL
 61.97       0.56       0.13       0.43       616                ONLY A LITTLE
 62.66       0.56       0.82*      0.26       900                QUITE A BIT
 61.48       0.91      -0.36       0.54       473                A LOT

----FAMILY OCCUPATIONAL STATUS                             ----
 63.15       0.61       1.30*      0.26      1188                HIGH
 61.92       0.47       0.08       0.44       606                MEDIUM
 58.38       1.17      -3.46*      1.02       158                LOW
 59.31       0.93      -2.53*      0.69       212                UNKNOWN
 54.43       1.43      -7.41*      1.37        72                NONE

----DO YOU WANT A JOB LISTED IN QUESTION 18?----
 62.62       0.67       0.78*      0.25      1160                YES
 60.44       0.50      -1.40*      0.36       656                NO
 61.96       0.64       0.11       0.51       417                I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 20?----
 59.36       0.65      -2.48*      0.32       680                YES
 63.01       0.55       1.17*      0.22      1154                NO
 62.78       0.75       0.94       0.64       401                I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 22?----
 56.07       0.96      -5.78*      0.69       246                YES
 62.98       0.48       1.14*      0.14      1741                NO
 59.60       0.86      -2.24*      0.69       248                I DON'T KNOW
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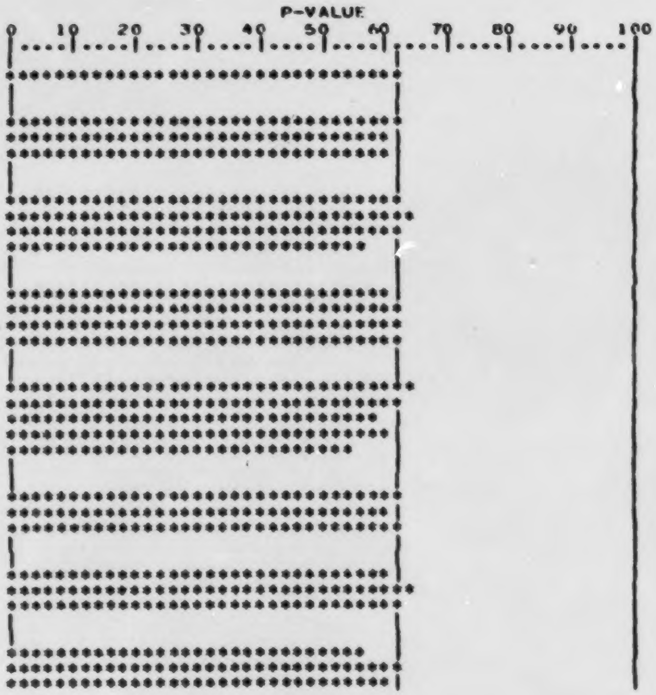

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              NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
             MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

                    TOTAL TEST SCORE

            SE OF     GROUP     SE OF    SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT     SIZE             REPORTING GROUP

 61.84      0.52                          2238             ALL STUDENTS

----HOW SURE ARE YOU ABOUT FUTURE JOB?            ----
 60.56      0.78     -1.28*     0.45       506             NOT VERY SURE
 62.63      0.49      0.79*     0.30      1023             SOMEWHAT SURE
 61.64      0.70     -0.20      0.37       706             VERY SURE

----PARENTS WANT YOU TO GO TO COLLEGE?            ----
 54.79      0.90     -7.05*     0.85       149             HARDLY AT ALL
 58.77      0.72     -3.07*     0.65       278             ONLY A LITTLE
 62.01      0.50      0.17      0.37       771             QUITE A BIT
 63.60      0.70      1.76*     0.30      1022             A LOT

----WHAT DO YOU PLAN TO DO?                       ----
 58.26      0.83     -3.58*     0.79       199             FULL-TIME JOB
 51.97      1.74     -9.87*     1.57        65             JOB-SCHOOL
 61.10      0.69     -0.74      0.59       281             SPECIAL TRAINING
 60.86      1.12     -0.98      1.10        70             2-YEAR COLLEGE
 65.83      0.50      3.99*     0.26       910             4-YEAR COLLEGE
 59.12      0.57     -2.73*     0.34       704             DON'T KNOW

----HAVE YOU EVER DONE REGULAR WORK?              ----
 62.05      0.49      0.21*     0.10      1999             YES
 60.53      1.06     -1.31      0.76       233             NO

----KIND OF COMMUNITY                             ----
 55.89      1.26     -5.95*     1.02       450             BIG CITIES
 62.16      1.17      0.32      1.11       342             INDUSTRIAL
 64.94      0.40      3.10*     0.55       847             RESIDENTIAL
 61.63      0.51     -0.21      0.63       599             OTHER

----REGION OF THE STATE                           ----
 61.26      1.48     -0.58      1.12       598             BOSTON
 61.70      1.11     -0.14      0.97       444             NORTHEAST
 63.48      0.61      1.64*     0.78       204             PITTSFIELD
 61.91      0.70      0.07      0.75       385             SOUTHEAST
 60.66      1.40     -1.18      1.37       235             SPRINGFIELD
 63.04      0.61      1.20      0.72       372             WORCESTER
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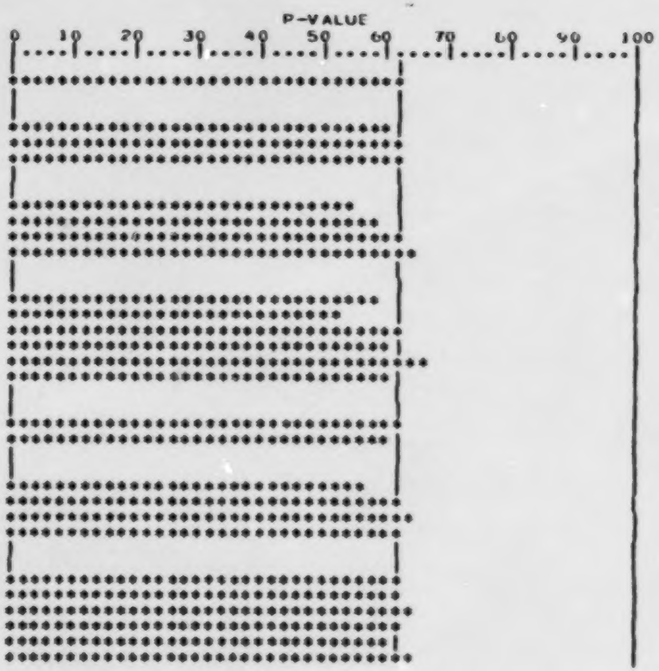

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             NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
           MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

                  TOTAL TEST SCORE

            SE OF     GROUP     SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT    SIZE            REPORTING GROUP

 61.84      0.52                         2238            ALL STUDENTS

----HOMEWORK - WORK ON YOUR OWN                  ----
 57.29      1.68     -4.55*     1.41      114            DAILY
 59.41      0.79     -2.43*     0.50      402            WEEKLY
 62.81      0.45      0.97*     0.18     1709            MONTHLY

----TALKED WITH CAREER OR GUIDANCE COUNSELOR----
 61.22      0.76     -0.63      0.48      550            YES
 62.24      0.49      0.40*     0.18     1669            NO

----TALKED WITH PARENT                           ----
 62.25      0.53      0.41*     0.11     1930            YES
 60.03      0.74     -1.81*     0.60      298            NO

----TLAKED WITH FRIEND                           ----
 62.03      0.49      0.19      0.15     1734            YES
 61.75      0.76     -0.09      0.46      487            NO

----TALKED WITH PERSON IN INTERESTING JOB        ----
 60.66      0.72     -1.18*     0.34      750            YES
 62.72      0.44      0.87*     0.21     1458            NO

----TALKED WITH TEACHER                          ----
 61.37      0.99     -0.48      0.65      334            YES
 62.10      0.46      0.26      0.15     1878            NO

----DID YOU EVER TAKE A CAREER TEST?             ----
 63.80      0.71      1.96*     0.44      542            YES
 62.04      0.55      0.20      0.30     1185            NO
 59.48      0.72     -2.36*     0.44      506            I DON'T KNOW
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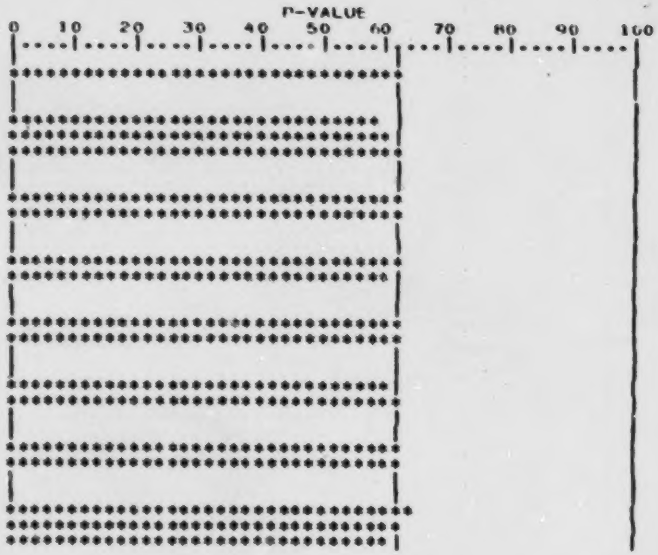
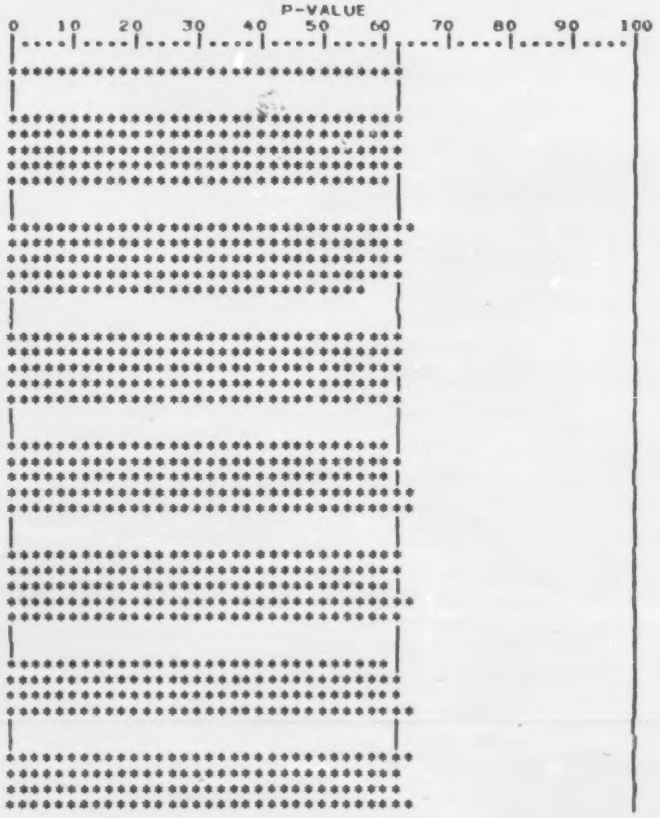


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13-YEAR OLDS SPRING 1978

TOTAL TEST SCORE

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
61.84	0.52			2236	ALL STUDENTS
----EMPHASIS ON OBJECTIVE A. ----					
62.99	1.12	1.14	1.12	228	FIRST
61.04	1.31	-0.80	1.12	429	SECOND
62.71	0.51	0.86	0.66	406	THIRD
62.88	1.27	1.04	1.23	237	FOURTH
60.95	1.11	-0.89	0.82	757	FIFTH
----EMPHASIS ON OBJECTIVE B. ----					
63.44	0.72	1.59*	0.77	398	FIRST
61.56	0.98	-0.28	0.91	481	SECOND
61.87	1.20	0.03	1.05	448	THIRD
61.22	1.12	-0.62	0.88	681	FOURTH
56.26	4.26	-5.58	4.18	49	FIFTH
----EMPHASIS ON OBJECTIVE C. ----					
62.49	0.52	0.65	0.71	185	FIRST
62.72	1.68	0.88	1.49	326	SECOND
62.29	0.88	0.45	0.69	808	THIRD
59.55	1.23	-2.29*	1.10	410	FOURTH
62.28	1.10	0.44	1.05	352	FIFTH
----EMPHASIS ON OBJECTIVE D. ----					
60.79	1.09	-1.05	0.90	593	FIRST
61.78	1.34	-0.06	1.21	400	SECOND
59.09	2.49	-2.75	2.27	235	THIRD
63.70	0.76	1.86*	0.83	285	FOURTH
63.12	0.58	1.28*	0.65	568	FIFTH
----EMPHASIS ON OBJECTIVE E. ----					
61.65	1.22	-0.19	0.99	604	FIRST
61.36	0.88	-0.48	0.78	611	SECOND
60.48	1.94	-1.36	1.72	327	THIRD
63.87	0.55	2.03*	0.69	326	FOURTH
62.46	0.82	0.62	0.90	213	FIFTH
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE A. ----					
60.75	1.69	-1.09	1.73	44	VERY SATISFIED
62.54	1.03	0.70	0.80	757	SATISFIED
61.01	0.69	-0.84	0.50	1112	DISSATISIFED
64.57	0.85	2.73*	0.96	121	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE B. ----					
63.85	1.69	2.01	1.68	92	VERY SATISFIED
61.83	0.88	-0.01	0.68	827	SATISFIED
61.24	0.81	-0.60	0.58	991	DISSATISIFED
63.52	1.62	1.68	1.63	124	VERY DISSATISFIE



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          NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
        MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13-YEAR OLDS SPRING 1978

           TOTAL TEST SCORE

             SF OF     GROUP     SF OF   SAMPLF
P-VALUE   P-VALUE    EFFCCT    EFFFCT    SIZE            REPORTING GROUP

 61.84      0.52                         2238            ALL STUDENTS

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE C. ----
 61.24       1.06     -0.60      1.15      50            VERY SATISFIED
 62.13       0.98      0.29      0.76     740            SATISFIED
 61.34       0.72     -0.51      0.50    1153            DISSATISIFED
 64.89       1.13      3.05*     1.19      98            VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE D. ----
 68.74       0.61      6.90*     0.80      23            VFRY SATISFIED
 62.16       0.69      0.32      0.47    1269            SATISFIED
 60.89       1.02     -0.95      0.83     642            DISSATISIFED
 65.60       1.08      3.76*     1.17      75            VFRY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE E. ----
 64.56       0.96      2.72*     1.03     143            VERY SATISFIED
 61.66       0.65     -0.19      0.42    1319            SATISFIED
 61.93       1.30      0.09      1.09     521            DISSATISIFED
 60.59       1.91     -1.25      1.95      50            VERY DISSATISFIE

----IS YOUR SCHOOL AN ESEA TITLE I SCHOOL?  ----
 60.08       0.81     -1.77*     0.58     985            YFS
 63.34       0.65      1.50*     0.54    1073            NO

----PARENTAL SUPPORT OF YOUR SCHOOL?           ----
 62.71       0.96      0.87      0.76     703            EXCELLENT
 63.26       0.49      1.42*     0.57     849            GOOD
 59.44       1.21     -2.40*     1.07     438            AVERAGE
 58.80       2.86     -3.04      2.79      66            FAIR
 49.80       0.77    -12.04*     0.92      25            POOR

----ATTITUDE OF STUDENTS TOWARD SCHOOL?        ----
 62.73       1.18      0.89      1.04     448            EXCELLENT
 63.15       0.52      1.31*     0.55     996            GOOD
 58.46       1.10     -3.38*     0.90     592            AVERAGE
 62.40       1.23      0.55      1.30      50            FAIR
  0.0        0.0     -61.84*     0.52       0            POOR

----ATTFNDANCE FIRST QUARTER                   ----
 60.00       0.83     -1.84*     0.52    1061            LOW
 64.04       0.45      2.20*     0.53     951            HIGH

----ATTENDANCE SECOND QUARTFR                  ----
 59.99       1.04     -1.85*     0.72     840            LOW
 63.34       0.45      1.50*     0.51    1150            HIGH
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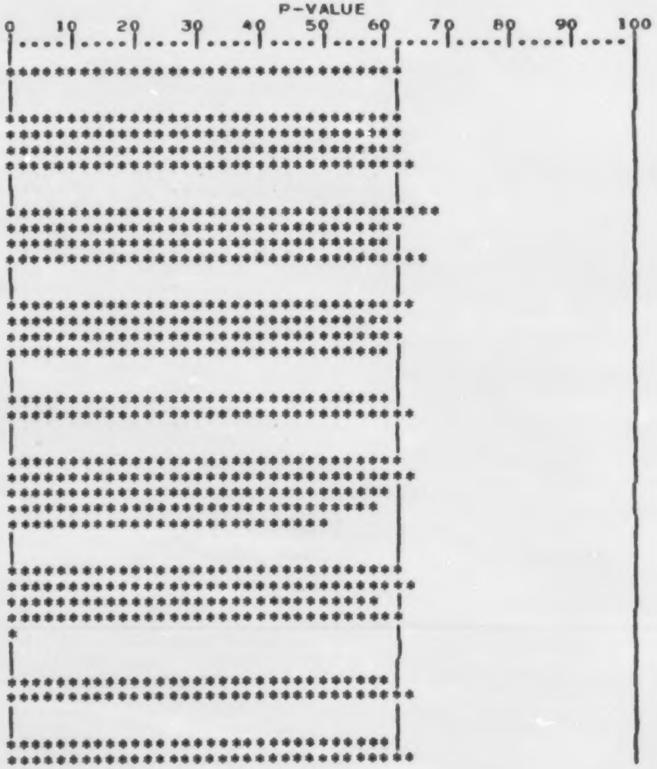
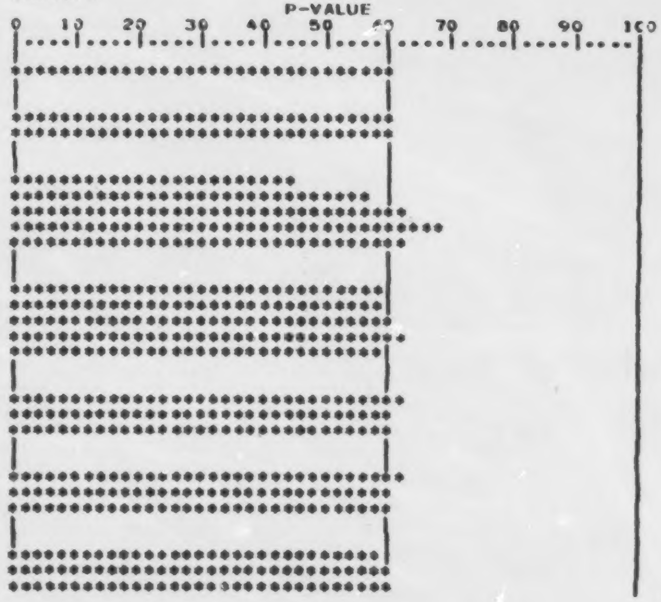


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS SPRING 1978

OBJECTIVE 1. KNOWLEDGE OF CHARACTERISTICS OF VARIOUS CAREERS

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE		REPORTING GROUP
60.43	0.36			2238		ALL STUDENTS
----SEX OF THE STUDENT					----	
60.28	0.45	-0.15	0.31	1044		MALE
60.61	0.48	0.18	0.28	1191		FEMALE
----GRADE OF THE STUDENT					----	
43.21	3.23	-17.23*	3.32	14		6TH GRADE
55.43	0.86	-5.00*	0.77	291		7TH GRADE
61.30	0.35	0.87*	0.16	1920		8TH GRADE
68.52	5.36	8.09	5.33	9		9TH GRADE
62.00	0.00	1.57*	0.35	1		10TH GRADE
----HOW DO YOU FEEL ABOUT SCHOOL?					----	
58.37	1.18	-2.06	1.14	104		STRONGLY DISLIKE
58.88	0.82	-1.55*	0.77	307		DISLIKE
60.10	0.46	-0.33	0.32	882		SCHOOL IS OK
61.93	0.47	1.50*	0.30	840		LIKE
58.18	1.71	-2.26	1.57	103		STRONGLY LIKE
----HOMEWORK - DRILL WORK					----	
61.43	0.43	0.99*	0.24	1181		DAILY
59.23	0.49	-1.20*	0.42	768		WEEKLY
59.74	0.90	-0.70	0.74	278		MONTHLY
----HOMEWORK - READING ASSIGNED MATERIAL					----	
61.59	0.59	1.16*	0.47	436		DAILY
60.80	0.47	0.36	0.29	919		WEEKLY
59.66	0.47	-0.78*	0.33	873		MONTHLY
----HOMEWORK - WRITING ON ASSIGNED TOPICS					----	
57.03	1.47	-3.40*	1.41	79		DAILY
59.89	0.76	-0.54	0.56	504		WEEKLY
60.80	0.35	0.36*	0.19	1647		MONTHLY



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         NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
       MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

             OBJECTIVE 1. KNOWLEDGE OF CHARACTERISTICS OF VARIOUS CAREERS

             SE OF     GROUP    SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT   EFFECT    SIZE              REPORTING GROUP

 60.43      0.36                        2238              ALL STUDENTS

----HOMEWORK - WORK ON YOUR OWN                  ----
 55.79      1.42     -4.65*     1.33     114              DAILY
 58.17      0.72     -2.26*     0.59     402              WEEKLY
 61.37      0.37      0.93*     0.19    1709              MONTHLY

----TALKED WITH CAREER OR GUIDANCE COUNSELOR----
 59.93      0.61     -0.50      0.49     550              YES
 60.79      0.36      0.36*     0.17    1669              NO

----TALKED WITH PARENT                           ----
 60.78      0.38      0.34*     0.11    1930              YES
 58.60      0.72     -1.83*     0.69     298              NO

----TLAKED WITH FRIEND                           ----
 60.57      0.38      0.14      0.16    1734              YES
 60.53      0.66      0.10      0.55     487              NO

----TALKED WITH PERSON IN INTERESTING JOB        ----
 59.83      0.53     -0.61      0.35     750              YES
 61.01      0.36      0.58*     0.21    1458              NO

----TALKED WITH TEACHER                          ----
 59.35      0.75     -1.09      0.63     334              YES
 60.78      0.34      0.35*     0.13    1878              NO

----DID YOU EVER TAKE A CAREER TEST?             ----
 61.75      0.55      1.31*     0.45     542              YES
 60.61      0.44      0.17      0.29    1185              NO
 58.80      0.63     -1.63*     0.46     506              I DON'T KNOW
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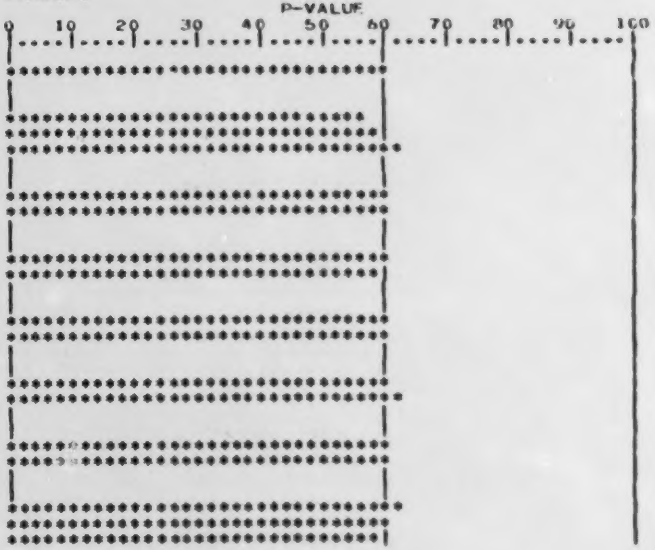
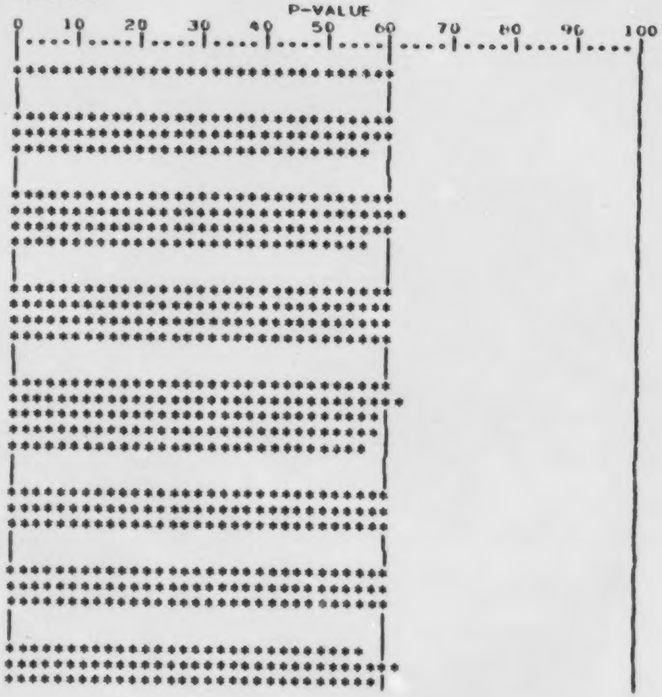


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS SPRING 1976

OBJECTIVE 1. KNOWLEDGE OF CHARACTERISTICS OF VARIOUS CAREERS

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
60.43	0.36			2238	ALL STUDENTS
----ARE FIELD TRIPS USEFUL? ----					
60.50	0.37	0.06	0.08	1982	YES
60.51	0.82	0.08	0.73	227	NO
56.44	1.78	-3.99*	1.82	27	NEVER GONE
----SCHOOLING HELPS YOU THINK ABOUT WORK? ----					
59.93	0.70	-0.50	0.62	348	NOT VERY USEFUL
61.57	0.37	1.14*	0.27	1162	SOMEWHAT USEFUL
59.78	0.59	-0.65	0.41	520	VERY USEFUL
56.66	1.13	-3.78*	0.99	205	I DON'T KNOW
----HOW MUCH ARE YOUR PARENTS INVOLVED? ----					
59.78	0.89	-0.65	0.77	247	HARDLY AT ALL
60.86	0.50	0.43	0.42	616	ONLY A LITTLE
60.83	0.47	0.46	0.30	900	QUITE A BIT
59.48	0.71	-0.95	0.56	473	A LOT
----FAMILY OCCUPATIONAL STATUS ----					
60.97	0.45	0.54	0.28	1188	HIGH
61.21	0.57	0.77	0.48	606	MEDIUM
58.87	1.07	-1.57	0.99	158	LOW
58.21	0.92	-2.22*	0.80	212	UNKNOWN
55.65	1.43	-5.38*	1.43	72	NONE
----DO YOU WANT A JOB LISTED IN QUESTION 18?----					
60.58	0.49	0.15	0.26	1160	YES
60.08	0.47	-0.35	0.41	656	NO
60.65	0.66	0.21	0.55	417	I DON'T KNOW
----DO YOU WANT A JOB LISTED IN QUESTION 20?----					
59.73	0.52	-0.70*	0.35	680	YES
60.71	0.41	0.27	0.24	1154	NO
60.88	0.81	0.45	0.70	401	I DON'T KNOW
----DO YOU WANT A JOB LISTED IN QUESTION 22?----					
56.16	0.88	-4.27*	0.70	246	YES
61.33	0.33	0.90*	0.17	1741	NO
58.38	1.02	-2.05*	0.90	248	I DON'T KNOW



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                NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
              MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

                  OBJECTIVE 1. KNOWLEDGE OF CHARACTERISTICS OF VARIOUS CAREERS

            SE OF     GROUP     SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT    SIZE             REPORTING GROUP

 60.43      0.36                         2238             ALL STUDENTS

----HOW SURE ARE YOU ABOUT FUTURE JOB?           ----
 59.73      0.68     -0.70      0.50      506             NOT VERY SURE
 60.78      0.40      0.34      0.30     1023             SOMEWHAT SURE
 60.46      0.55      0.03      0.37      706             VERY SURE

----PARENTS WANT YOU TO GO TO COLLEGE?           ----
 55.05      1.05     -5.38*     1.01      149             HARDLY AT ALL
 58.66      0.84     -1.78*     0.78      278             ONLY A LITTLE
 60.69      0.46      0.46      0.37      771             QUITE A BIT
 61.37      0.51      0.93*     0.30     1022             A LOT

----WHAT DO YOU PLAN TO DO?                      ----
 59.30      0.98     -1.13      1.01      199             FULL-TIME JOB
 53.18      1.65     -7.25*     1.51       65             JOB-SCHOOL
 59.87      0.78     -0.57      0.70      281             SPECIAL TRAINING
 59.70      1.66     -0.73      1.63       70             2-YEAR COLLEGE
 63.03      0.43      2.60*     0.30      910             4-YEAR COLLEGE
 58.47      0.49     -1.97*     0.35      704             DON'T KNOW

----HAVE YOU EVER DONE REGULAR WORK?             ----
 60.61      0.35      0.18      0.17     1999             YES
 59.23      1.11     -1.20      0.96      233             NO

----KIND OF COMMUNITY                            ----
 58.04      0.97     -2.39*     0.81      450             BIG CITIES
 59.92      0.99     -0.51      0.90      342             INDUSTRIAL
 61.89      0.44      1.46*     0.40      847             RESIDENTIAL
 60.37      0.37     -0.06      0.44      599             OTHER

----REGION OF THE STATE                          ----
 59.94      0.95     -0.50      0.72      598             BOSTON
 60.34      0.76     -0.09      0.67      444             NORTHEAST
 61.48      0.64      1.05      0.71      204             PITTSFIELD
 60.35      0.50     -0.08      0.52      385             SOUTHEAST
 59.10      1.16     -1.33      1.11      235             SPRINGFIELD
 61.84      0.53      1.41*     0.56      372             WORCESTER
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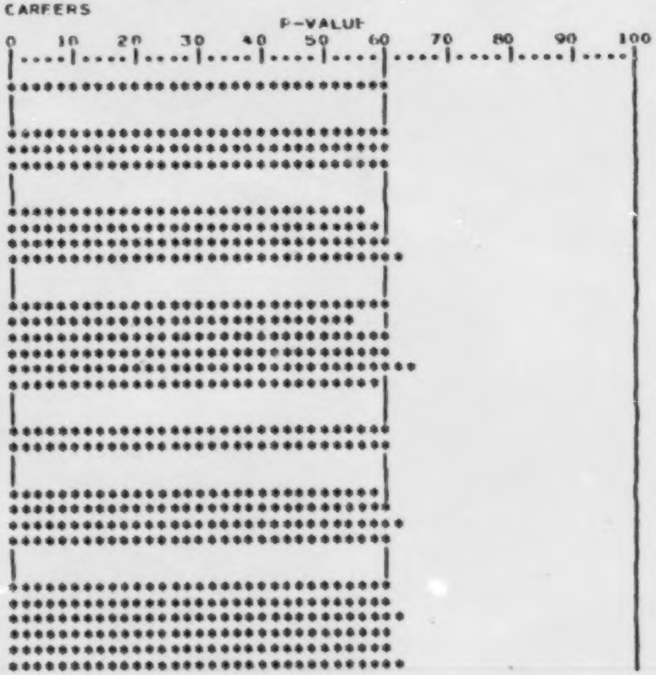

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NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13-YEAR OLDS SPRING 1978

OBJECTIVE 1. KNOWLEDGE OF CHARACTERISTICS OF VARIOUS CAREERS

           SE OF     GROUP     SE OF   SAMPLE
P-VALUE  P-VALUE    EFFECT    EFFECT    SIZE           REPORTING GROUP

 60.43     0.36                         2238           ALL STUDENTS

----EMPHASIS ON OBJECTIVE A.                    ----
 61.61     0.85      1.18      0.84      228           FIRST
 59.15     0.83     -1.29      0.73      429           SECOND
 60.90     0.78      0.47      0.71      406           THIRD
 61.25     0.77      0.82      0.77      237           FOURTH
 60.00     0.70     -0.43      0.54      757           FIFTH

----EMPHASIS ON OBJECTIVE B.                    ----
 61.06     0.67      0.63      0.63      398           FIRST
 60.07     0.60     -0.36      0.58      481           SECOND
 59.79     0.87     -0.64      0.75      448           THIRD
 60.71     0.71      0.28      0.58      681           FOURTH
 56.38     3.66     -4.05      3.59       49           FIFTH

----EMPHASIS ON OBJECTIVE C.                    ----
 60.07     0.55     -0.36      0.61      185           FIRST
 61.12     0.98      0.68      0.89      326           SECOND
 61.15     0.53      0.71      0.45      808           THIRD
 58.40     1.01     -2.03*     0.86      410           FOURTH
 60.37     0.79     -0.06      0.75      352           FIFTH

----EMPHASIS ON OBJECTIVE D.                    ----
 60.10     0.87     -0.33      0.69      593           FIRST
 60.41     0.94     -0.02      0.84      400           SECOND
 59.48     1.31     -0.96      1.22      235           THIRD
 60.28     0.76     -0.15      0.74      285           FOURTH
 61.06     0.47      0.62      0.49      568           FIFTH

----EMPHASIS ON OBJECTIVE E.                    ----
 60.06     0.74     -0.37      0.61      604           FIRST
 60.00     0.62     -0.43      0.54      611           SECOND
 60.09     1.22     -0.34      1.10      327           THIRD
 61.89     0.58      1.46*     0.59      326           FOURTH
 60.30     1.23     -0.13      1.16      213           FIFTH

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE A. ----
 59.11     0.53     -1.32*     0.62       44           VERY SATISFIED
 60.85     0.60      0.41      0.51      757           SATISFIED
 59.84     0.53     -0.59      0.34     1112           DISSATISIFED
 61.38     0.93      0.95      0.96      121           VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE B. ----
 61.35     1.12      0.92      1.12       92           VERY SATISFIED
 60.18     0.53     -0.25      0.44      827           SATISFIED
 60.26     0.61     -0.17      0.42      991           DISSATISIFED
 59.83     1.39     -0.60      1.38      124           VERY DISSATISFIE
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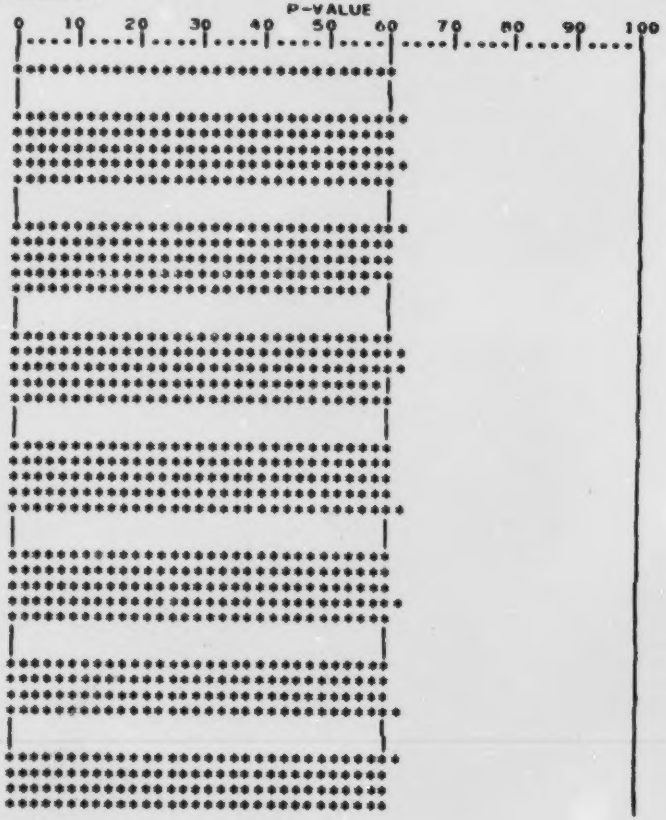

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               NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
            MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13-YEAR OLDS SPRING 1978

                 OBJECTIVE I. KNOWLEDGE OF CHARACTERISTICS OF VARIOUS CAREERS

           SE OF     GROUP     SE OF   SAMPLE
P-VALUE   P-VALUE   EFFECT    EFFECT    SIZE          REPORTING GROUP

 60.43      0.36                        2238          ALL STUDENTS

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE C. ----
 57.46      0.48    -2.97*     0.59       50          VERY SATISFIED
 59.96      0.61    -0.47      0.50      740          SATISFIED
 60.48      0.51     0.05      0.35     1153          DISSATISIFED
 62.02      0.69     1.59*     0.75       98          VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE D. ----
 63.78      0.74     3.35*     0.81       23          VERY SATISFIED
 60.66      0.49     0.22      0.32     1269          SATISFIED
 59.71      0.67    -0.72      0.56      642          DISSATISIFED
 62.28      0.78     1.85*     0.83       75          VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE E. ----
 60.21      1.18    -0.22      1.15      143          VERY SATISFIED
 60.37      0.45    -0.06      0.29     1319          SATISFIED
 60.55      0.92     0.12      0.77      521          DISSATISIFED
 58.82      1.98    -1.61      1.99       50          VERY DISSATISFIE

----IS YOUR SCHOOL AN ESEA TITLE I SCHOOL?  ----
 59.90      0.59    -0.54      0.41      985          YES
 60.73      0.47     0.30      0.37     1073          NO

----PARENTAL SUPPORT OF YOUR SCHOOL?           ----
 60.43      0.64     0.00      0.51      703          EXCELLENT
 61.38      0.43     0.95*     0.41      849          GOOD
 59.27      0.85    -1.16      0.74      438          AVERAGE
 59.88      1.87    -0.55      1.84       66          FAIR
 50.84      0.70    -9.59*     0.77       25          POOR

----ATTITUDE OF STUDENTS TOWARD SCHOOL?        ----
 60.44      0.70     0.00      0.64      448          EXCELLENT
 61.07      0.48     0.63      0.39      996          GOOD
 58.77      0.76    -1.66*     0.63      592          AVERAGE
 62.19      2.31     1.76      2.30       50          FAIR
  0.0       0.0    -60.43*     0.35        0          POOR

----ATTENDANCE FIRST QUARTER                   ----
 58.14      1.01    -2.29*     0.85      408          LOW
 60.94      0.36     0.51      0.27     1604          HIGH

----ATTENDANCE FIRST QUARTER                   ----
 59.45      0.55    -0.98*     0.35     1061          LOW
 61.35      0.44     0.92*     0.38      951          HIGH

----ATTENDANCE SECOND QUARTER                  ----
 59.47      0.67    -0.96*     0.47      840          LOW
 60.95      0.41     0.52      0.34     1150          HIGH
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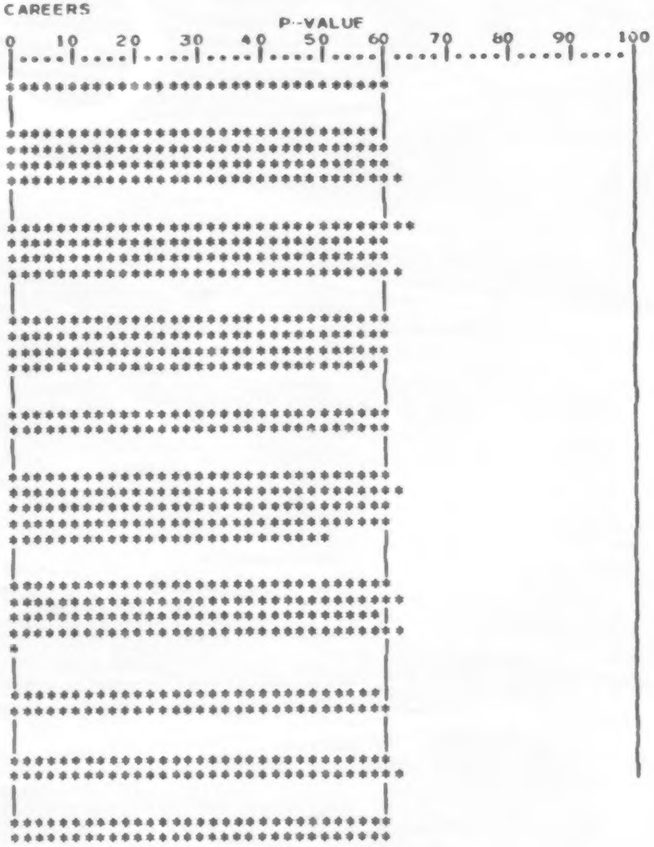
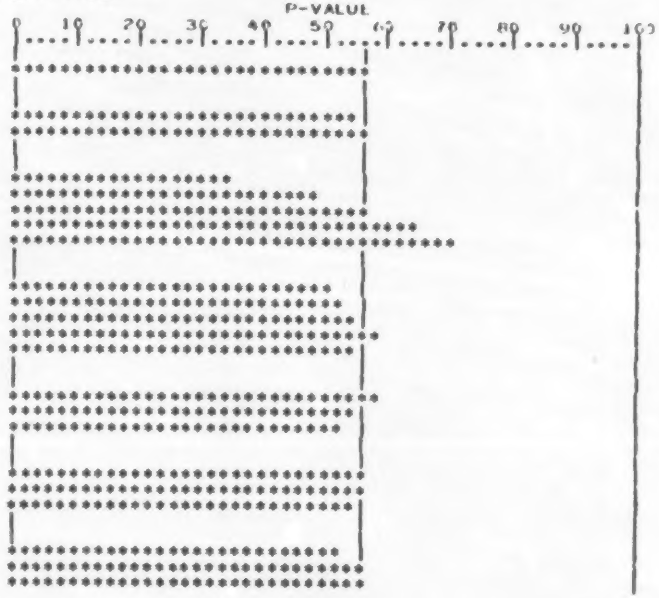


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS SPRING 1978

OBJECTIVE 2. KNOWLEDGE OF ABILITIES, TRAINING, AND PREPARATION

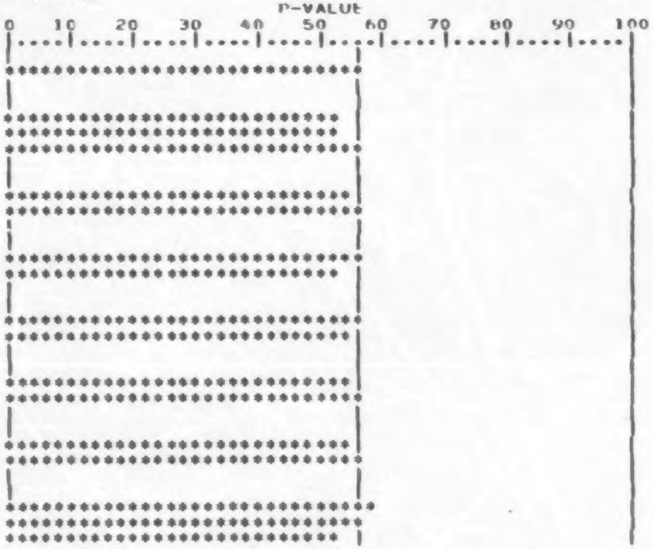
P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE		REPORTING GROUP
55.14	0.56			2238		ALL STUDENTS
----SEX OF THE STUDENT					----	
54.30	0.70	-0.84*	0.39	1044		MALE
55.92	0.64	0.78*	0.35	1191		FEMALE
----GRADE OF THE STUDENT					----	
34.85	2.55	-20.29*	2.57	14		6TH GRADE
47.61	1.14	-7.53*	1.04	291		7TH GRADE
56.43	0.53	1.29*	0.20	1920		8TH GRADE
64.13	3.71	8.99*	3.70	9		9TH GRADE
70.00	0.00	14.86*	0.55	1		10TH GRADE
----HOW DO YOU FEEL ABOUT SCHOOL?					----	
49.77	1.55	-5.37*	1.52	104		STRONGLY DISLIKE
51.36	0.89	-3.78*	0.72	307		DISLIKE
54.43	0.64	-0.71	0.41	882		SCHOOL IS OK
56.19	0.70	3.04*	0.44	840		LIKE
54.14	2.18	-1.00	1.87	103		STRONGLY LIKE
----HOMEWORK - DRILL WORK					----	
57.03	0.63	1.89*	0.34	1181		DAILY
53.23	0.71	-1.91*	0.46	768		WEEKLY
52.66	0.95	-2.48*	0.81	278		MONTHLY
----HOMEWORK - READING ASSIGNED MATERIAL					----	
56.71	0.93	1.57*	0.69	436		DAILY
56.20	0.71	1.06*	0.39	919		WEEKLY
53.46	0.57	-1.68*	0.38	873		MONTHLY
----HOMEWORK - WRITING ON ASSIGNED TOPICS					----	
51.41	2.38	-3.73	2.15	79		DAILY
55.79	0.94	0.65	0.64	504		WEEKLY
55.19	0.52	0.05	0.22	1647		MONTHLY



NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS SPRING 1978

OBJECTIVE 2. KNOWLEDGE OF ABILITIES, TRAINING, AND PREPARATION

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
55.14	0.56			2238	ALL STUDENTS
----HOMEWORK - WORK ON YOUR OWN ----					
52.41	1.08	-2.73	1.67	114	DAILY
52.40	0.87	-2.74*	0.60	402	WEEKLY
56.11	0.52	0.96*	0.19	1709	MONTHLY
----TALKED WITH CAREER OR GUIDANCE COUNSELOR----					
54.69	0.84	-0.45	0.61	550	YES
55.52	0.56	0.38	0.22	1669	NO
----TALKED WITH PARENT ----					
55.69	0.56	0.55*	0.13	1930	YES
52.42	0.92	-2.73*	0.76	298	NO
----TLAKED WITH FRIEND ----					
55.46	0.53	0.32	0.17	1734	YES
54.55	0.86	-0.59	0.57	487	NO
----TALKED WITH PERSON IN INTERESTING JOB ----					
54.21	0.85	-0.93*	0.45	750	YES
55.92	0.48	0.78*	0.27	1458	NO
----TALKED WITH TEACHER ----					
54.84	1.19	-0.30	0.86	334	YES
55.41	0.49	0.27	0.19	1878	NO
----DID YOU EVER TAKE A CAREER TEST? ----					
57.38	0.85	2.24*	0.61	542	YES
55.18	0.59	0.04	0.36	1185	NO
52.92	0.88	-2.22*	0.60	506	I DON'T KNOW



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                     NATIONAL FVALUATIUN SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                   MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

                     OBJECTIVE 2. KNOWLEDGE OF ABILITIFS, TRAINING, AND PREPARATION

             SF OF     GROUP      SE OF   SAMPLE
 P-VALUE   P-VALUE    EFFECT     EFFECT    SIZE             REPORTING GROUP

  55.14      0.56                          2238             ALL STUDENTS

 ----ARE FIELD TRIPS USEFUL?                       ----
  55.28      0.56      0.14       0.12     1982             YES
  54.69      1.16     -0.45       1.00      227             NO
  51.31      3.02     -3.83       2.96       27             NEVER GONE

 ----SCHOOLING HELPS YOU THINK ABOUT WORK?         ----
  54.84      0.88     -0.30       0.71      348             NOT VFRY USEFUL
  56.68      0.54      1.54*      0.34     1162             SOMEWHAT USEFUL
  54.79      0.87     -0.35       0.57      520             VFRY USFFUL
  46.17      1.33     -6.98*      1.06      205             I DON'T KNOW

 ----HOW MUCH ARE YOUR PARENTS INVOLVED?           ----
  51.22      0.95     -3.93*      0.88      247             HARDLY AT ALL
  55.41      0.69      0.27       0.58      616             ONLY A LITTLE
  56.22      0.65      1.08*      0.35      900             QUITF A BIT
  54.69      1.37     -0.25       0.70      473             A LOT

 ----FAMILY OCCUPATIONAL STATUS                    ----
  56.91      0.68      1.77*      0.34     1188             HIGH
  54.62      0.55     -0.52       0.52      606             MEDIUM
  50.24      1.26     -4.90*      1.12      158             LOW
  52.39      1.27     -2.76*      1.03      212             UNKNOWN
  48.6[illegible]      1.61     -6.46*      1.56       72             NONE

 ----DO YOU WANT A JOB LISTED IN QUESTION 18?----
  56.39      0.75      1.25*      0.32     1160             YES
  53.64      0.57     -1.50*      0.48      656             NO
  54.07      0.78     -1.07       0.65      417             I DON'T KNOW

 ----DO YOU WANT A JOB LISTED IN QUESTION 20?----
  52.52      0.70     -2.62*      0.45      680             YES
  56.54      0.65      1.39*      0.32     1154             NO
  55.62      0.96      0.48       0.80      401             I DON'T KNOW

 ----DO YOU WANT A JOB LISTED IN QUESTION 22?----
  47.43      1.39     -7.[illegible]*      0.90      246             YES
  56.65      0.54      1.[illegible]1*      0.18     1741             NO
  52.18      1.03     -2.[illegible]96*      0.91      246             I DON'T KNOW
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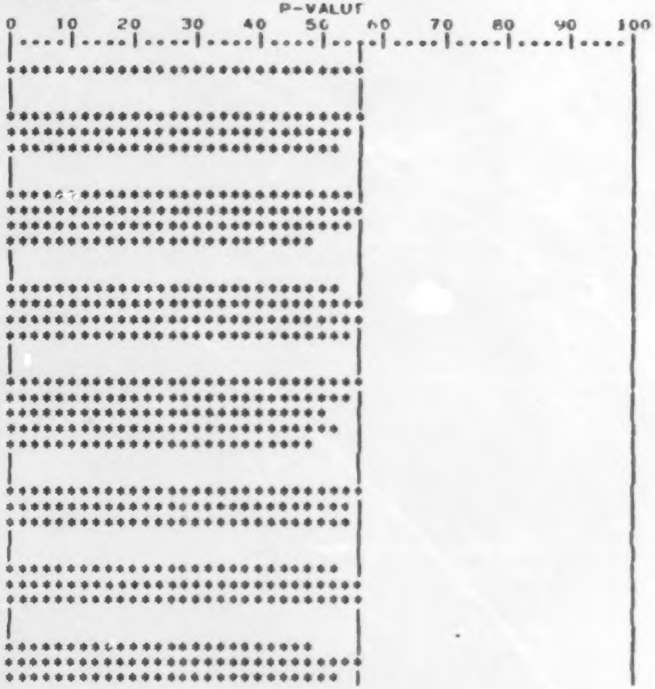

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NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

OBJECTIVE 2. KNOWLEDGE OF ABILITIES, TRAINING, AND PREPARATION

           SE OF     GROUP     SE OF   SAMPLE
P-VALUE  P-VALUE    EFFECT    EFFECT    SIZE          REPORTING GROUP

 55.14     0.56                         2238          ALL STUDENTS

----HOW SURE ARE YOU ABOUT FUTURE JOB?         ----
 53.49     0.91     -1.65*     0.62      506          NOT VERY SURE
 55.55     0.59      0.41      0.36     1023          SOMEWHAT SURE
 55.73     0.76      0.58      0.47      706          VERY SURE

----PARENTS WANT YOU TO GO TO COLLEGE?         ----
 46.38     1.22     -8.76*     1.20      149          HARDLY AT ALL
 51.54     0.98     -3.61*     0.94      278          ONLY A LITTLE
 54.89     0.63     -0.25      0.50      771          QUITE A BIT
 57.61     0.77      2.46*     0.37     1022          A LOT

----WHAT DO YOU PLAN TO DO?                    ----
 51.32     1.03     -3.82*     1.01      199          FULL-TIME JOB
 45.27     2.25     -9.87*     2.12       65          JOB-SCHOOL
 54.26     0.98     -0.89      0.88      281          SPECIAL TRAINING
 52.48     1.51     -2.66      1.49       70          2-YEAR COLLEGE
 60.07     0.61      4.93*     0.35      910          4-YEAR COLLEGE
 51.48     0.65     -3.66*     0.48      704          DON'T KNOW

----HAVE YOU EVER DONE REGULAR WORK?           ----
 55.34     0.52      0.20      0.13     1999          YES
 53.89     1.32     -1.26      1.02      233          NO

----KIND OF COMMUNITY                          ----
 49.43     1.18     -5.72*     1.02      450          BIG CITIES
 55.67     1.39      0.53      1.29      342          INDUSTRIAL
 58.77     0.50      3.63*     0.60      847          RESIDENTIAL
 53.85     0.56     -1.29      0.68      599          OTHER

----REGION OF THE STATE                        ----
 55.51     1.50      0.37      1.16      598          BOSTON
 55.62     1.14      0.48      1.01      444          NORTHEAST
 55.39     1.08      0.24      1.17      204          PITTSFIELD
 54.68     0.94     -0.46      0.91      385          SOUTHEAST
 53.43     1.67     -1.71      1.60      235          SPRINGFIELD
 55.28     0.86      0.13      0.89      372          WORCESTER
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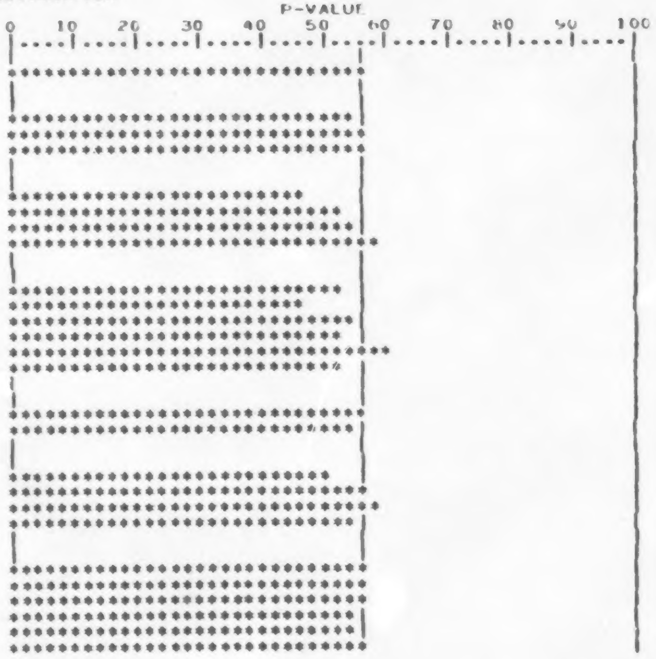
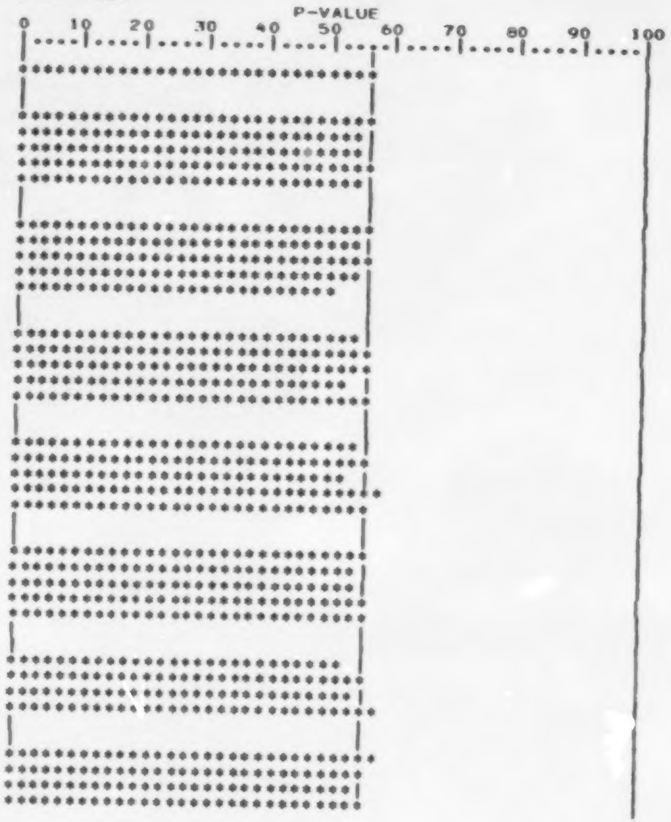


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT CUD 13-YEAR OLDS SPRING 1978

OBJECTIVE 2. KNOWLEDGE OF ABILITIES, TRAINING, AND PREPARATION

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
55.14	0.56			2236	ALL STUDENTS
----EMPHASIS ON OBJECTIVE A. ----					
55.84	1.64	0.70	1.57	228	FIRST
54.55	1.38	-0.59	1.19	429	SECOND
54.98	0.72	-0.16	0.79	406	THIRD
55.97	1.68	0.83	1.58	237	FOURTH
54.84	1.08	-0.30	0.83	757	FIFTH
----EMPHASIS ON OBJECTIVE B. ----					
56.85	0.95	1.71	0.93	398	FIRST
54.43	1.22	-0.71	1.08	481	SECOND
55.42	1.20	0.28	1.07	448	THIRD
54.47	1.12	-0.67	0.90	681	FOURTH
50.24	2.14	-4.90*	2.15	49	FIFTH
----EMPHASIS ON OBJECTIVE C. ----					
53.98	0.96	-1.16	1.04	185	FIRST
56.41	1.54	1.27	1.40	326	SECOND
55.92	0.97	0.77	0.75	808	THIRD
53.00	1.17	-2.14*	1.08	410	FOURTH
55.21	1.46	0.07	1.34	352	FIFTH
----EMPHASIS ON OBJECTIVE D. ----					
54.18	1.13	-0.97	0.95	593	FIRST
55.24	1.39	0.10	1.26	400	SECOND
52.39	2.46	-2.76	2.24	235	THIRD
57.19	0.89	2.05*	0.94	285	FOURTH
56.10	0.81	0.96	0.78	568	FIFTH
----EMPHASIS ON OBJECTIVE E. ----					
55.65	1.18	0.50	0.99	604	FIRST
54.75	0.99	-0.40	0.86	611	SECOND
53.07	2.03	-2.07	1.80	327	THIRD
56.90	0.95	1.76	0.97	326	FOURTH
55.05	1.16	-0.09	1.17	213	FIFTH
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE A. ----					
52.48	2.45	-2.66	2.46	44	VERY SATISFIED
55.91	1.09	0.77	0.84	757	SATISFIED
54.22	0.70	-0.92	0.52	1112	DISSATISIFED
58.84	1.38	3.70*	1.43	121	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE B. ----					
57.22	2.55	2.08	2.49	92	VERY SATISFIED
55.13	0.91	-0.02	0.71	827	SATISFIED
54.49	0.83	-0.65	0.62	991	DISSATISIFED
56.95	2.67	1.81	2.62	124	VERY DISSATISFIE



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              NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
            MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13-YEAR OLDS SPRING 1978

                OBJECTIVE 2. KNOWLEDGE OF ABILITIES, TRAINING, AND PREPARATION

              SE OF      GROUP      SE OF    SAMPLE
P-VALUE     P-VALUE     EFFECT     EFFECT     SIZE              REPORTING GROUP

 55.14        0.56                            2238              ALL STUDENTS

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE C. ----                VERY SATISFIED
 54.53        1.35      -0.62       1.42        50              SATISFIED
 55.33        0.96       0.18       0.77       740              DISSATISIFED
 54.67        0.80      -0.47       0.54      1153              VERY DISSATISFIE
 58.58        2.23       3.44       2.22        98

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE D. ----                VERY SATISFIED
 63.13        0.89       7.99*      1.04        23              SATISFIED
 55.58        0.73       0.44       0.50      1269              DISSATISIFED
 53.80        1.05      -1.34       0.87       642              VERY DISSATISFIE
 59.84        2.27       4.70*      2.28        75

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE E. ----                VERY SATISFIED
 58.43        1.40       3.29*      1.42       143              SATISFIED
 54.78        0.67      -0.36       0.45      1319              DISSATISIFED
 55.76        1.39       0.61       1.17       521              VERY DISSATISFIE
 51.67        2.67      -3.47       2.68        50

----IS YOUR SCHOOL AN ESEA TITLE I SCHOOL?      ----            YES
 53.26        0.83      -1.88*      0.62       985              NO
 56.75        0.74       1.61*      0.57      1073

----PARENTAL SUPPORT OF YOUR SCHOOL?            ----            EXCELLENT
 55.98        0.97       0.84       0.79       703              GOOD
 56.12        0.72       0.98       0.65       849              AVERAGE
 53.23        1.25      -1.91       1.10       438              FAIR
 51.77        3.78      -3.37       3.68        66              POOR
 47.12        0.93      -8.02*      1.07        25

----ATTITUDE OF STUDENTS TOWARD SCHOOL?         ----            EXCELLENT
 55.50        1.13       0.36       1.02       448              GOOD
 56.46        0.67       1.31*      0.60       996              AVERAGE
 52.04        1.15      -3.10*      0.94       592              FAIR
 54.15        2.34      -0.99       2.35        50              POOR
  0.0         0.0      -55.14*      0.55         0

----ATTENDANCE FIRST QUARTER                    ----            LOW
 53.24        0.85      -1.90*      0.56      1061              HIGH
 57.38        0.59       2.24*      0.58       951

----ATTENDANCE SECOND QUARTER                   ----            LOW
 53.63        1.07      -1.51*      0.75       840              HIGH
 56.43        0.56       1.29*      0.53      1150
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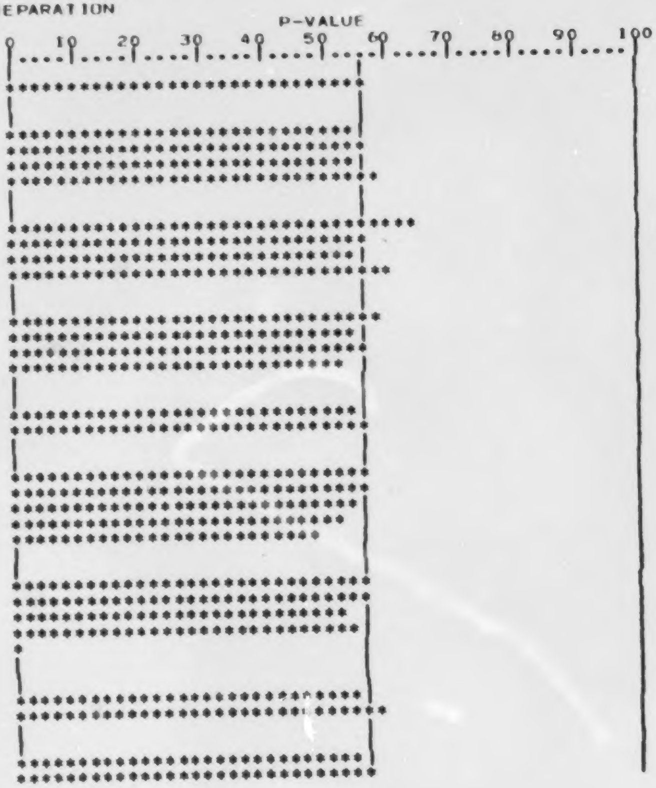

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                 NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
               MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT CUD 13 YEAR OLDS  SPRING 1978

                  OBJECTIVE 3. KNOWLEDGE AND ABILITY NECESSARY TO PLAN AND IMPLEMENT

             SE OF     GROUP     SE OF   SAMPLE
P-VALUE    P-VALUE    EFFECT    EFFECT    SIZE                REPORTING GROUP

 55.65       0.59                         2238                ALL STUDENTS

----SEX OF THE STUDENT                                ----
 54.67       0.74     -0.99*     0.35     1044                MALE
 56.53       0.62      0.88*     0.31     1191                FEMALE

----GRADE OF THE STUDENT                              ----
 38.52       2.95    -17.13*     2.84       14                6TH GRADE
 47.81       1.00     -7.84*     0.91      291                7TH GRADE
 56.97       0.55      1.31*     0.19     1920                8TH GRADE
 62.80       5.23      7.15      5.25        9                9TH GRADE
 70.00       0.00     14.35*     0.59        1                10TH GRADE

----HOW DO YOU FEEL ABOUT SCHOOL?                     ----
 49.89       1.36     -5.77*     1.22      104                STRONGLY DISLIKE
 52.93       0.90     -2.72*     0.69      307                DISLIKE
 54.96       0.74     -0.70      0.38      882                SCHOOL IS OK
 58.15       0.58      2.50*     0.36      840                LIKE
 55.83       2.12      0.17      1.81      103                STRONGLY LIKE

----HOMEWORK - DRILL WORK                             ----
 57.34       0.61      1.68*     0.26     1181                DAILY
 54.00       0.71     -1.65*     0.43      768                WEEKLY
 53.33       1.19     -2.33*     0.98      278                MONTHLY

----HOMEWORK - READING ASSIGNED MATERIAL              ----
 56.97       0.91      1.22*     0.62      436                DAILY
 56.30       0.70      0.64      0.37      919                WEEKLY
 54.50       0.66     -1.16*     0.39      873                MONTHLY

----HOMEWORK - WRITING ON ASSIGNED TOPICS             ----
 53.37       1.99     -2.29      1.74       79                DAILY
 55.95       0.94      0.30      0.61      504                WEEKLY
 55.72       0.57      0.06      0.23     1647                MONTHLY
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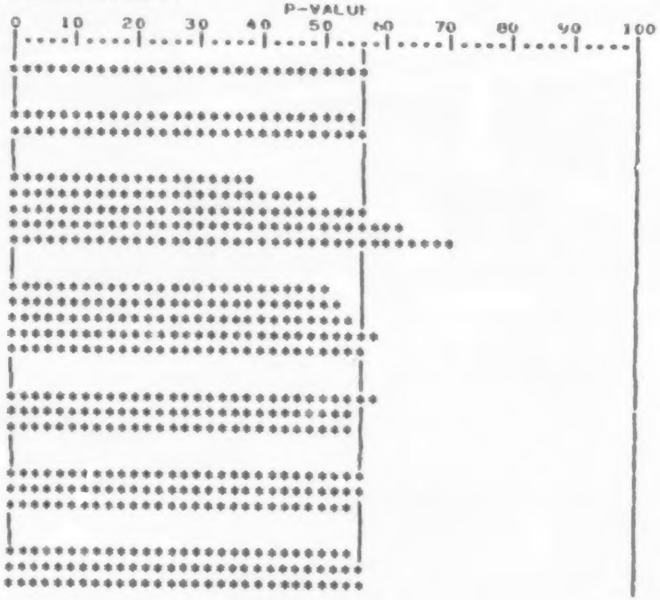

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              NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
           MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

              OBJECTIVE 3. KNOWLEDGE AND ABILITY NECESSARY TO PLAN AND IMPLEMENT

            SE OF     GROUP     SE OF   SAMPLE
P-VALUE   P-VALUE   EFFECT    EFFECT    SIZE              REPORTING GROUP

 55.65     0.59                         2238              ALL STUDENTS

----HOMEWORK - WORK ON YOUR OWN                   ----
 50.85     1.91     -4.80*     1.61      114              DAILY
 53.21     0.97     -2.45*     0.68      402              WEEKLY
 56.61     0.54      0.96*     0.20     1709              MONTHLY

----TALKED WITH CAREER OR GUIDANCE COUNSELOR----
 55.32     0.88     -0.34      0.55      550              YES
 55.92     0.56      0.26      0.20     1669              NO

----TALKED WITH PARENT                            ----
 56.06     0.59      0.40*     0.13     1930              YES
 53.85     0.95     -1.80*     0.73      298              NO

----TLAKED WITH FRIEND                            ----
 55.95     0.56      0.24      0.15     1734              YES
 55.24     0.82     -0.41      0.53      487              NO

----TALKED WITH PERSON IN INTERESTING JOB         ----
 54.08     0.81     -1.57*     0.42      750              YES
 56.67     0.54      1.02*     0.24     1458              NO

----TALKED WITH TEACHER                           ----
 55.27     1.12     -0.38      0.74      334              YES
 55.85     0.53      0.19      0.16     1878              NO

----DID YOU EVER TAKE A CAREER TEST?              ----
 58.03     0.81      2.38*     0.55      542              YES
 55.77     0.68      0.11      0.36     1185              NO
 53.06     0.81     -2.59*     0.56      506              I DON'T KNOW
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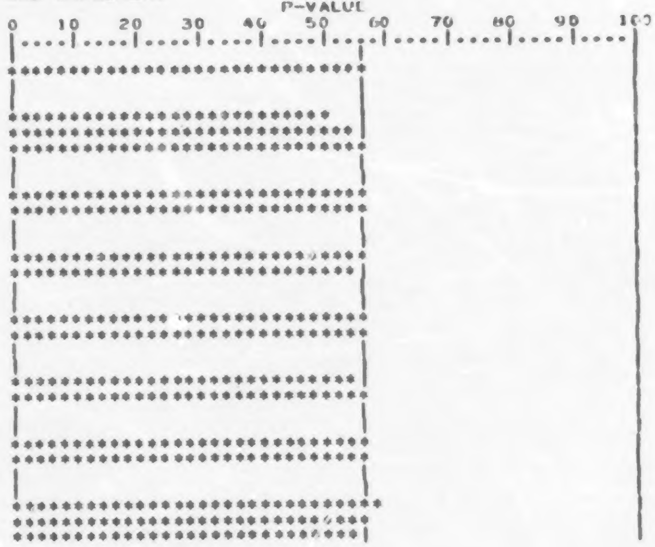
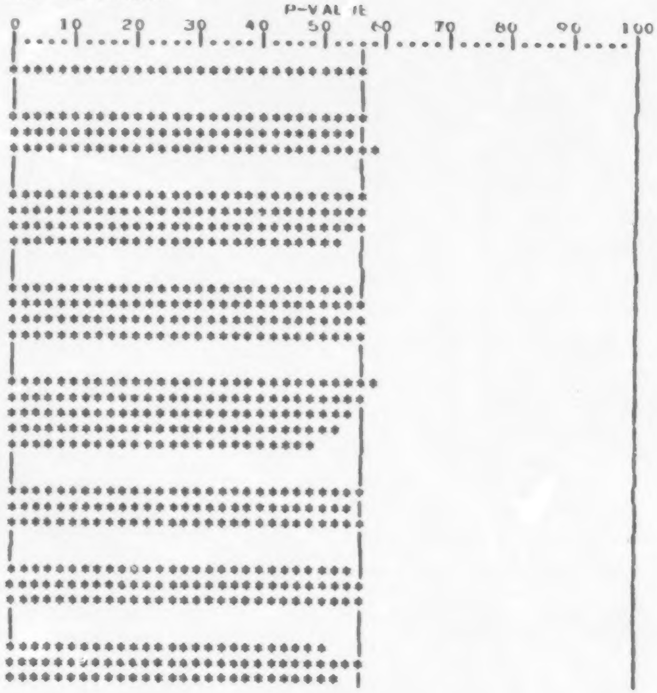


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS SPRING 1978

OBJECTIVE 3. KNOWLEDGE AND ABILITY NECESSARY TO PLAN AND IMPLEMENT

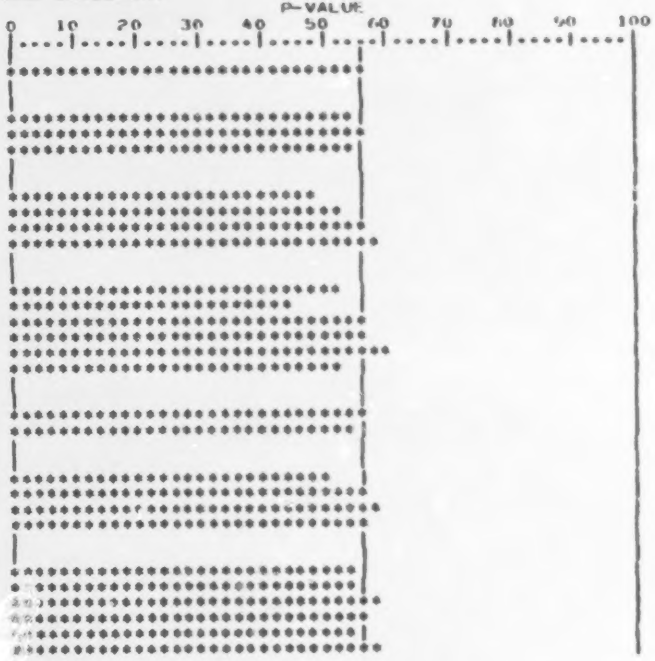
P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
55.65	0.59			2238	ALL STUDENTS
----ARE FIELD TRIPS USEFUL? ----					
55.83	0.59	0.18	0.11	1982	YES
53.96	1.02	-1.70*	0.81	227	NO
58.53	3.13	2.87	2.99	27	NEVER GONE
----SCHOOLING HELPS YOU THINK ABOUT WORK? ----					
55.21	0.93	-0.44	0.68	348	NOT VERY USEFUL
56.77	0.53	1.12*	0.32	1162	SOMEWHAT USEFUL
55.36	0.94	-0.30	0.56	520	VERY USEFUL
51.02	1.24	-4.63*	0.95	205	I DON'T KNOW
----HOW MUCH ARE YOUR PARENTS INVOLVED? ----					
53.31	1.04	-2.34*	0.88	247	HARDLY AT ALL
55.35	0.70	-0.31	0.54	616	ONLY A LITTLE
56.40	0.68	0.74*	0.33	900	QUITE A BIT
55.95	0.98	0.30	0.61	473	A LOT
----FAMILY OCCUPATIONAL STATUS ----					
57.01	0.70	1.36*	0.31	1188	HIGH
55.53	0.62	-0.12	0.52	606	MEDIUM
53.37	1.51	-2.28	1.32	158	LOW
52.74	1.16	-2.91*	0.93	212	UNKNOWN
47.74	1.69	-7.91*	1.68	72	NONE
----DO YOU WANT A JOB LISTED IN QUESTION 18?----					
56.34	0.72	0.69*	0.28	1160	YES
54.14	0.70	-1.52*	0.45	656	NO
56.29	0.76	0.64	0.64	417	I DON'T KNOW
----DO YOU WANT A JOB LISTED IN QUESTION 20?----					
53.10	0.85	-2.56*	0.46	680	YES
56.91	0.60	1.25*	0.27	1154	NO
56.51	0.88	0.86	0.77	401	I DON'T KNOW
----DO YOU WANT A JOB LISTED IN QUESTION 22?----					
50.46	1.17	-5.19*	0.88	246	YES
56.81	0.56	1.16*	0.16	1741	NO
52.75	0.99	-2.90*	0.81	248	I DON'T KNOW



NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS SPRING 1978

OBJECTIVE 3. KNOWLEDGE AND ABILITY NECESSARY TO PLAN AND IMPLEMENT

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
55.65	0.59			2238	ALL STUDENTS
----HOW SURE ARE YOU ABOUT FUTURE JOB?					----
54.00	0.94	-1.65*	0.56	506	NOT VERY SURE
56.97	0.57	1.32*	0.36	1023	SOMEWHAT SURE
54.97	0.77	-0.68	0.42	706	VERY SURE
----PARENTS WANT YOU TO GO TO COLLEGE?					----
48.71	1.17	-6.94*	1.00	149	HARDLY AT ALL
51.64	0.99	-4.02*	0.83	278	ONLY A LITTLE
56.07	0.60	0.41	0.43	771	QUITE A BIT
57.50	0.76	1.84*	0.37	1022	A LOT
----WHAT DO YOU PLAN TO DO?					----
51.57	1.17	-4.08*	1.02	199	FULL-TIME JOB
44.61	1.87	-11.05*	1.69	65	JOB-SCHOOL
55.13	0.82	-0.53	0.67	281	SPECIAL TRAINING
55.56	1.52	-0.09	1.42	70	2-YEAR COLLEGE
59.74	0.58	4.08*	0.35	910	4-YEAR COLLEGE
52.87	0.67	-2.78*	0.42	704	DON'T KNOW
----HAVE YOU EVER DONE REGULAR WORK?					----
55.86	0.57	0.20	0.12	1999	YES
54.37	1.17	-1.28	0.90	233	NO
----KIND OF COMMUNITY					----
49.04	1.39	-6.62*	1.20	450	BIG CITIES
56.51	1.44	0.85	1.35	342	INDUSTRIAL
58.69	0.42	3.03*	0.62	847	RESIDENTIAL
55.77	0.82	0.12	0.82	599	OTHER
----REGION OF THE STATE					----
54.79	1.62	-0.86	1.24	598	BOSTON
54.96	1.28	-0.70	1.12	444	NORTHEAST
57.59	0.58	1.94*	0.81	204	PITTSFIELD
56.32	0.80	0.66	0.85	385	SOUTHEAST
54.00	1.51	-1.66	1.49	235	SPRINGFIELD
57.53	0.97	1.88	0.99	372	WORCESTER



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                         NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                        MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13-YEAR OLDS SPRING 1978

                         OBJECTIVE 3. KNOWLEDGE AND ABILITY NECESSARY TO PLAN AND IMPLEMENT

            SE OF     GROUP      SE OF    SAMPLE
 P-VALUE   P-VALUE    EFFECT     EFFECT    SIZE              REPORTING GROUP

  55.65     0.59                           2230              ALL STUDENTS

----EMPHASIS ON OBJECTIVE A.                         ----
  57.49     1.21      1.83       1.22      228               FIRST
  55.13     1.44     -0.53       1.25      429               SECOND
  56.88     0.57      1.23       0.74      406               THIRD
  57.52     1.33      1.86       1.31      237               FOURTH
  54.33     1.24     -1.32       0.92      757               FIFTH

----EMPHASIS ON OBJECTIVE B.                         ----
  57.89     0.87      2.24*      0.91      398               FIRST
  56.13     1.16      0.48       1.06      481               SECOND
  55.75     1.26      0.10       1.13      446               THIRD
  54.67     1.22     -0.99       0.97      681               FOURTH
  47.78     3.81     -7.87*      3.77       49               FIFTH

----EMPHASIS ON OBJECTIVE C.                         ----
  58.58     0.68      2.92*      0.87      185               FIRST
  56.71     1.86      1.05       1.67      326               SECOND
  55.69     1.03      0.04       0.80      808               THIRD
  52.96     1.34     -2.70*      1.22      410               FOURTH
  56.86     0.86      1.21       0.93      352               FIFTH

----EMPHASIS ON OBJECTIVE D.                         ----
  54.45     1.20     -1.21       1.00      593               FIRST
  55.26     1.35     -0.40       1.25      400               SECOND
  52.48     2.64     -3.17       2.41      235               THIRD
  58.40     0.89      2.75*      0.97      285               FOURTH
  57.49     0.78      1.84*      0.80      568               [illegible]

----EMPHASIS ON OBJECTIVE E.                         ----
  54.78     1.26     -0.87       1.04      604               FIRST
  54.93     1.04     -0.72       0.91      611               SECOND
  55.06     2.13     -0.60       1.90      327               THIRD
  58.47     0.70      2.81*      0.82      226               FOURTH
  57.63     0.67      1.97*      0.83      213               FIFTH

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE A. ----
  57.23     2.61      1.57       2.61       44               VERY SATISFIED
  56.62     1.14      0.96       0.89      757               SATISFIED
  54.81     0.78     -0.84       0.56     1112               DISSATISIFED
  57.66     0.70      2.00*      0.88      121               VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE B. ----
  59.26     1.61      3.61*      1.63       92               VERY SATISFIED
  56.15     1.00      0.50       0.77      827               SATISFIED
  54.73     0.87     -0.92       0.65      991               DISSATISIFED
  57.00     1.19      1.35       1.28      124               VERY DISSATISFIE
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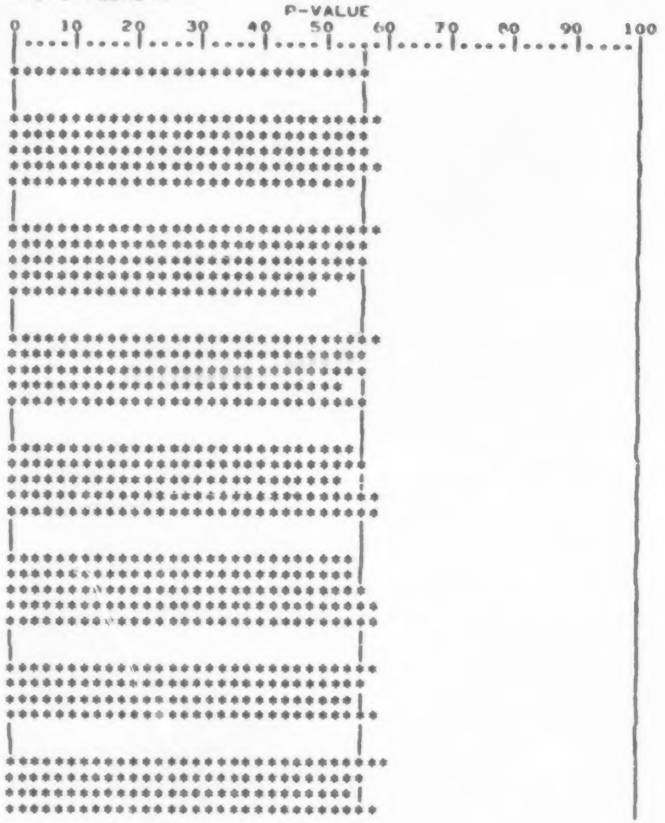
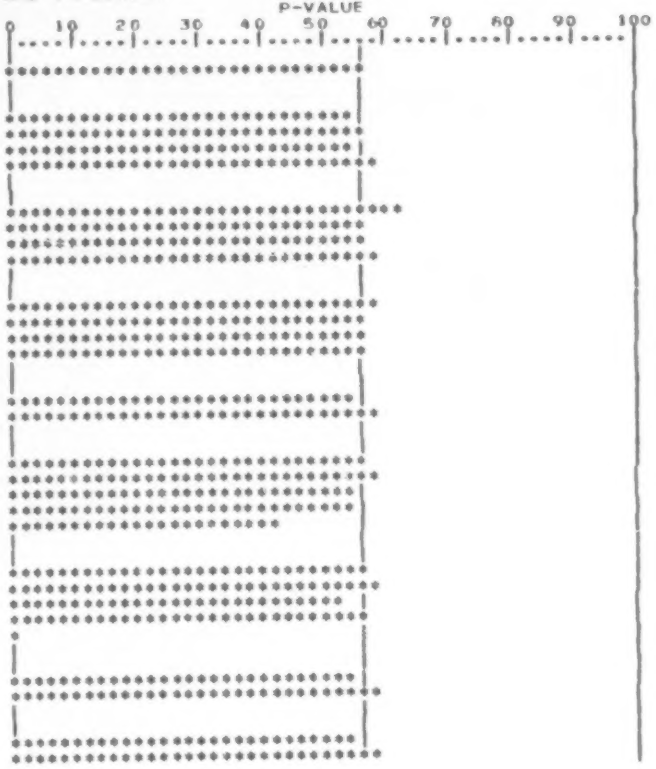


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13-YEAR OLDS SPRING 1978

OBJECTIVE 3. KNOWLEDGE AND ABILITY NECESSARY TO PLAN AND IMPLEMENT

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
55.65	0.59			2238	ALL STUDENTS
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE C. ----					
53.92	0.56	-1.74*	0.79	50	VERY SATISFIED
56.65	1.07	1.00	0.85	740	SATISFIED
54.97	0.81	-0.69	0.57	1153	DISSATISIFED
57.78	0.60	2.12*	0.82	98	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE D. ----					
61.83	0.70	6.17*	0.91	23	VERY SATISFIED
55.98	0.74	0.32	0.54	1269	SATISFIED
55.23	1.21	-0.42	0.98	642	DISSATISIFED
58.01	0.66	2.35*	0.86	75	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE F. ----					
57.89	1.36	2.24	1.38	143	VERY SATISFIED
55.79	0.74	0.13	0.48	1319	SATISFIED
55.46	1.35	-0.19	1.16	521	DISSATISIFED
56.33	2.35	0.68	2.39	50	VERY DISSATISFIE
----IS YOUR SCHOOL AN ESEA TITLE I SCHOOL? ----					
53.68	0.88	-1.97*	0.65	985	YES
57.53	0.72	1.88*	0.60	1073	NO
----PARENTAL SUPPORT OF YOUR SCHOOL? ----					
56.31	1.08	0.65	0.87	703	EXCELLENT
57.63	0.52	1.97*	0.64	849	GOOD
53.36	1.48	-2.29	1.30	438	AVERAGE
53.98	2.57	-1.67	2.53	66	FAIR
42.04	0.96	-13.61*	1.12	25	POOR
----ATTITUDE OF STUDENTS TOWARD SCHOOL? ----					
56.57	1.31	0.92	1.16	448	EXCELLENT
57.41	0.55	1.76*	0.62	996	GOOD
51.98	1.27	-3.68*	1.04	592	AVERAGE
56.09	2.31	0.44	2.31	50	FAIR
0.0	0.0	-55.65*	0.59	0	POOR
----ATTENDANCE FIRST QUARTER ----					
54.12	0.96	-1.53*	0.61	1061	LOW
57.88	0.53	2.22*	0.61	951	HIGH
----ATTENDANCE SECOND QUARTER ----					
54.00	1.19	-1.65*	0.83	840	LOW
57.28	0.52	1.62*	0.58	1150	HIGH



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                  NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                 MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

                     OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

          SE OF      GROUP     SE OF   SAMPLE
P-VALUE  P-VALUE    EFFECT    EFFECT    SIZE              REPORTING GROUP

 72.73     0.71                         2238              ALL STUDENTS

----SEX OF THE STUDENT                           ----
 70.56     0.90     -2.17*     0.39    1044               MALE
 74.67     0.71      1.94*     0.36    1191               FEMALE

----GRADE OF THE STUDENT                         ----
 43.65     3.69    -29.08*     3.76      14               6TH GRADE
 62.98     1.29     -9.75*     1.11     291               7TH GRADE
 74.41     0.67      1.68*     0.27    1920               8TH GRADE
 85.01     4.47     12.28*     4.52       9               9TH GRADE
 71.00     0.00     -1.73*     0.71       1               10TH GRADE

----HOW DO YOU FEEL ABOUT SCHOOL?                ----
 68.65     1.36     -4.08*     1.26     104               STRONGLY DISLIKE
 69.17     1.13     -3.56*     0.88     307               DISLIKE
 71.99     0.76     -0.74      0.39     882               SCHOOL IS OK
 75.47     0.79      2.74*     0.40     840               LIKE
 72.27     2.37     -0.46      1.97     103               STRONGLY LIKE

----HOMEWORK - DRILL WORK                        ----
 74.49     3.75      1.77*     0.36    1181               DAILY
 71.04     0.84     -1.69*     0.48     768               WEEKLY
 70.18     1.24     -2.55*     0.97     278               MONTHLY

----HOMEWORK - READING ASSIGNED MATERIAL         ----
 73.09     1.14      0.36      0.77     436               DAILY
 73.44     0.82      0.71      0.42     919               WEEKLY
 71.93     0.75     -0.80      0.44     673               MONTHLY

----HOMEWORK - WRITING ON ASSIGNED TOPICS        ----
 69.01     3.35     -3.72      3.04      79               DAILY
 73.00     1.06      0.27      0.63     504               WEEKLY
 72.85     0.66      0.12      0.25    1647               MONTHLY
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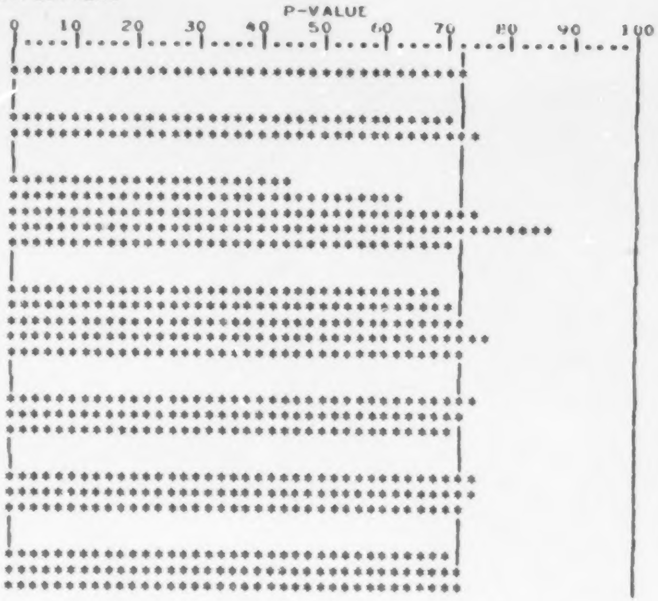

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           NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
         MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

            OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

            SE OF     GROUP     SE OF  SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT   SIZE             REPORTING GROUP

 72.72      0.71                        2238             ALL STUDENTS

----HOMEWORK - WORK ON YOUR OWN                   ----
 67.03      2.31     -5.70*     1.95     114             DAILY
 69.76      1.16     -2.97*     0.74     402             WEEKLY
 73.91      0.62      1.18*     0.26    1709             MONTHLY

----TALKED WITH CAREER OR GUIDANCE COUNSELOR----
 71.68      1.13     -1.05      0.72     550             YES
 73.29      0.66      0.56*     0.27    1669             NO

----TALKED WITH PARENT                            ----
 73.17      0.73      0.44*     0.14    1930             YES
 71.06      0.96     -1.67*     0.79     298             NO

----TLAKED WITH FRIEND                            ----
 72.91      0.65      0.18      0.21    1734             YES
 72.82      1.11      0.09      0.66     487             NO

----TALKED WITH PERSON IN INTERESTING JOB         ----
 71.19      0.98     -1.54*     0.47     750             YES
 73.81      0.62      1.08*     0.28    1458             NO

----TALKED WITH TEACHER                           ----
 72.59      1.40     -0.14      0.95     334             YES
 72.93      0.64      0.20      0.21    1878             NO

----DID YOU EVER TAKE A CAREER TEST?              ----
 74.48      0.98      1.75*     0.61     542             YES
 73.22      0.77      0.49      0.40    1185             NO
 69.83      1.03     -2.90*     0.68     506             I DON'T KNOW
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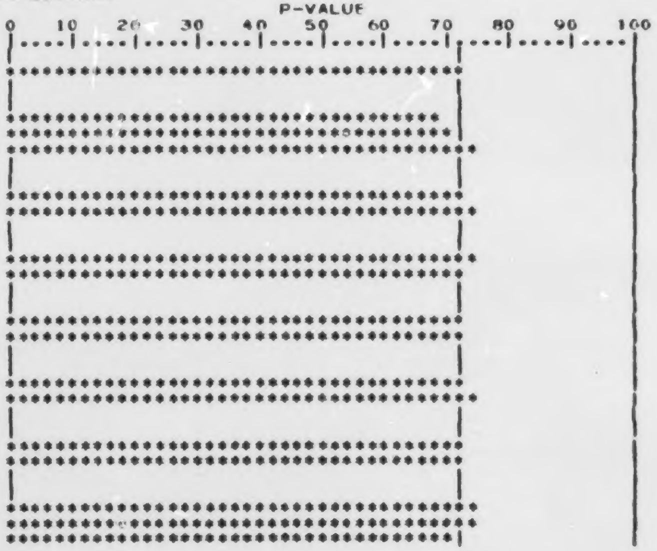
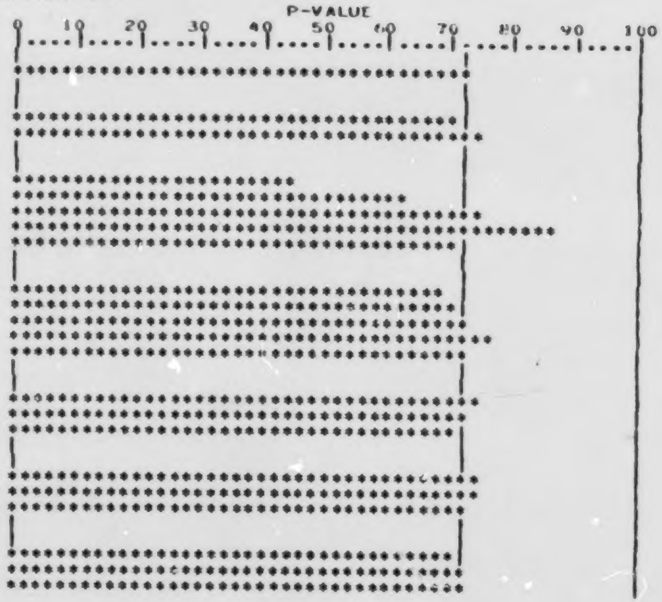


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS SPRING 1978

OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE		REPORTING GROUP
72.73	0.71			2238		ALL STUDENTS
----SEX OF THE STUDENT					----	
70.56	0.90	-2.17*	0.39	1044		MALE
74.67	0.71	1.94*	0.36	1191		FEMALE
----GRADE OF THE STUDENT					----	
43.65	3.69	-29.08*	3.76	14		6TH GRADE
62.98	1.29	-9.75*	1.11	291		7TH GRADE
74.41	0.67	1.68*	0.27	1920		8TH GRADE
85.01	4.47	12.28*	4.52	9		9TH GRADE
71.00	0.00	-1.73*	0.71	1		10TH GRADE
----HOW DO YOU FEEL ABOUT SCHOOL?					----	
68.65	1.36	-4.08*	1.26	104		STRONGLY DISLIKE
69.17	1.13	-3.56*	0.88	307		DISLIKE
71.99	0.76	-0.74	0.39	882		SCHOOL IS OK
75.47	0.79	2.74*	0.40	840		LIKE
72.27	2.37	-0.46	1.97	103		STRONGLY LIKE
----HOMEWORK - DRILL WORK					----	
74.49	0.75	1.77*	0.36	1181		DAILY
71.04	0.84	-1.69*	0.48	768		WEEKLY
70.18	1.24	-2.55*	0.97	278		MONTHLY
----HOMEWORK - READING ASSIGNED MATERIAL					----	
73.09	1.14	0.36	0.77	436		DAILY
73.44	0.82	0.71	0.42	919		WEEKLY
71.93	0.75	-0.80	0.44	873		MONTHLY
----HOMEWORK - WRITING ON ASSIGNED TOPICS					----	
69.01	3.35	-3.72	3.04	79		DAILY
73.00	1.06	0.27	0.63	504		WEEKLY
72.85	0.66	0.12	0.25	1647		MONTHLY



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            NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
          MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

             OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

            SE OF     GROUP      F OF   SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT    SIZE               REPORTING GROUP

 72.73      0.71                         2238               ALL STUDENTS

----ARE FIELD TRIPS USEFUL?                        ----
 72.99      0.72       0.26*     0.13    1982               YES
 71.57      1.22      -1.16      1.07     227               NO
 66.34      3.53      -6.39      3.40      27               NEVER GONE

----SCHOOLING HELPS YOU THINK ABOUT WORK?          ----
 71.93      0.92      -0.80      0.66     348               NOT VERY USEFUL
 74.66      0.60       1.93*     0.33    1162               SOMEWHAT USEFUL
 71.42      1.17      -1.31*     0.66     520               VERY USEFUL
 66.71      1.45      -6.02*     1.16     205               I DON'T KNOW

----HOW MUCH ARE YOUR PARENTS INVOLVED?            ----
 70.38      1.18      -2.35*     0.95     247               HARDLY AT ALL
 73.03      0.78       0.30      0.59     676               ONLY A LITTLE
 73.59      0.79       0.86*     0.38     900               QUITE A BIT
 72.01      1.22      -0.72      0.75     473               A LOT

----FAMILY OCCUPATIONAL STATUS                     ----
 74.29      0.77       1.56*     0.35    1188               HIGH
 72.99      0.77       0.26      0.65     606               MEDIUM
 67.81      1.86      -4.92*     1.58     158               LOW
 69.51      1.26      -3.22*     0.94     212               UNKNOWN
 64.72      2.21      -8.01*     2.03      72               NONE

----DO YOU WANT A JOB LISTED IN QUESTION 18?----
 73.74      0.86       1.01*     0.34    1160               YES
 70.97      0.82      -1.76*     0.53     656               NO
 72.78      0.91       0.05      0.70     417               I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 20?----
 69.45      0.88      -3.28*     0.43     680               YES
 74.21      0.76       1.48*     0.29    1154               NO
 74.19      0.94       1.46      0.79     401               I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 22?----
 66.95      1.26      -5.78*     0.98     246               YES
 73.80      0.69       1.07*     0.18    1741               NO
 71.06      1.13      -1.67      0.86     248               I DON'T KNOW
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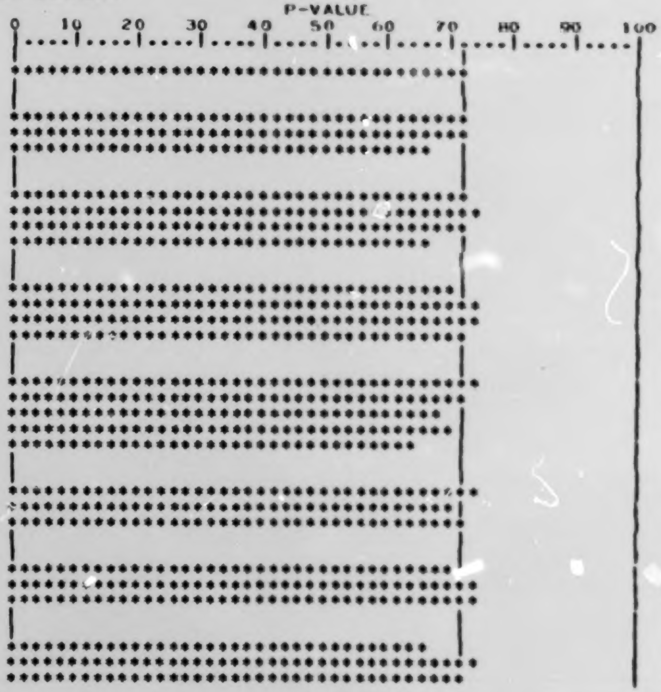

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                 NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
               MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

                    OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

           SE OF     GROUP      SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT    SIZE               REPORTING GROUP

 72.73     0.71                          2238               ALL STUDENTS

----HOW SURE ARE YOU ABOUT FUTURE JOB?          ----
 71.56     0.99     -1.17*     0.59      506                NOT VERY SURE
 73.66     0.69      0.93*     0.40     1023                SOMEWHAT SURE
 72.26     0.99     -0.47      0.54      706                VERY SURE

----PARENTS WANT YOU TO GO TO COLLEGE?          ----
 65.32     1.74     -7.41*     1.58      149                HARDLY AT ALL
 69.78     1.01     -2.95*     0.89      278                ONLY A LITTLE
 73.01     0.66      0.28      0.51      771                QUITE A BIT
 74.40     0.97      1.67*     0.43     1022                A LOT

----WHAT DO YOU PLAN TO DO?                     ----
 68.08     1.36     -4.65*     1.19      199                FULL-TIME JOB
 61.57     2.75    -11.16*     2.56       65                JOB-SCHOOL
 72.05     1.35     -0.67      0.85      281                SPECIAL TRAINING
 72.16     1.24     -0.57      1.35       70                2-YEAR COLLEGE
 77.08     0.67      4.35*     0.37      910                4-YEAR COLLEGE
 69.93     0.81     -2.80*     0.48      704                DON'T KNOW

----HAVE YOU EVER DONE REGULAR WORK?            ----
 73.02     0.68      0.29*     0.14     1999                YES
 71.07     1.33     -1.66      0.95      233                NO

----KIND OF COMMUNITY                           ----
 64.59     1.69     -8.14*     1.45      450                BIG CITIES
 73.15     1.39      0.42      1.36      342                INDUSTRIAL
 76.52     0.67      3.79*     0.78      847                RESIDENTIAL
 73.12     0.78      0.39      0.90      599                OTHER

----REGION OF THE STATE                         ----
 71.67     1.90     -1.06      1.46      598                BOSTON
 72.27     1.53     -0.46      1.34      444                NORTHEAST
 75.65     0.65      2.92*     0.94      204                PITTSFIELD
 72.85     1.27      0.12      1.21      385                SOUTHEAST
 72.25     2.04     -0.48      1.96      235                SPRINGFIELD
 74.34     0.79      1.61      0.96      372                WORCESTER
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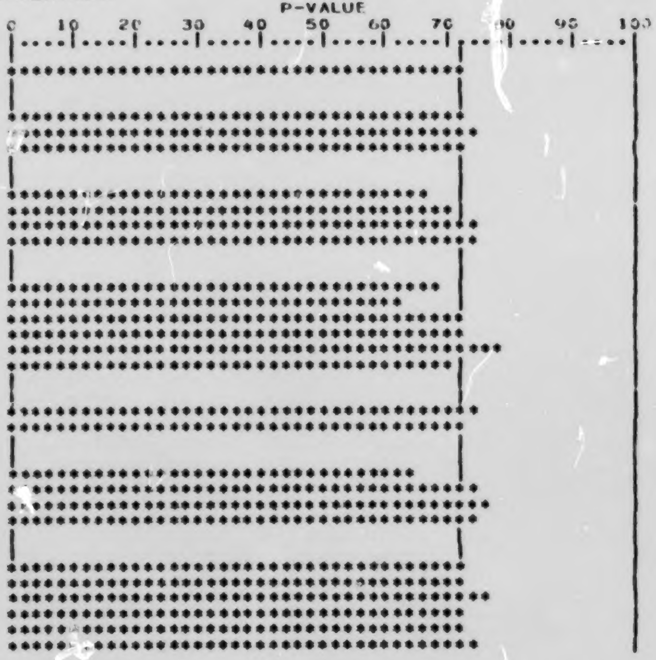
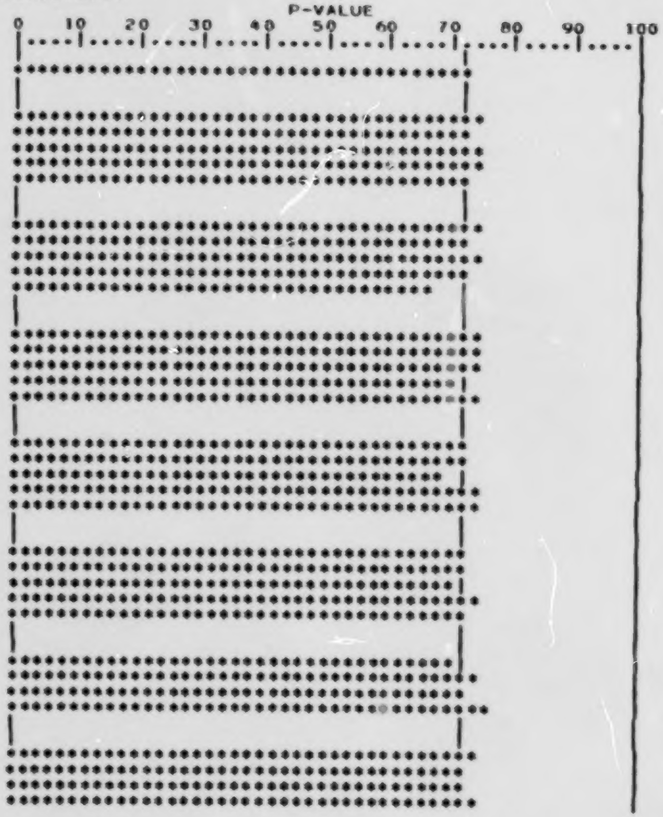


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13-YEAR OLDS SPRING 1978

OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
72.73	0.71			2238	ALL STUDENTS
----EMPHASIS ON OBJECTIVE A. ----					
73.09	1.19	0.36	1.27	228	FIRST
71.96	1.92	-0.77	1.64	429	SECOND
74.45	0.90	1.72	1.01	406	THIRD
73.04	1.75	0.31	1.69	237	FOURTH
71.48	1.49	-1.25	1.11	757	FIFTH
----EMPHASIS ON OBJECTIVE B. ----					
74.12	1.01	1.39	1.06	398	FIRST
72.18	1.26	-0.55	1.19	481	SECOND
73.38	1.53	0.65	1.35	448	THIRD
71.70	1.62	-1.03	1.26	681	FOURTH
66.23	7.47	-6.50	7.32	49	FIFTH
----EMPHASIS ON OBJECTIVE C. ----					
73.41	0.84	0.68	1.03	185	FIRST
73.02	2.52	0.29	2.22	326	SECOND
73.09	1.11	0.36	0.92	808	THIRD
70.65	1.71	-2.08	1.53	410	FOURTH
73.10	1.79	0.38	1.65	352	FIFTH
----EMPHASIS ON OBJECTIVE D. ----					
71.60	1.56	-1.13	1.27	593	FIRST
72.87	1.63	0.14	1.51	400	SECOND
68.24	3.61	-4.49	3.27	235	THIRD
74.77	1.15	2.04	1.21	285	FOURTH
74.25	0.69	1.52	0.84	568	FIFTH
----EMPHASIS ON OBJECTIVE E. ----					
72.56	1.71	-0.17	1.37	604	FIRST
72.28	1.16	-0.45	1.04	611	SECOND
70.82	2.74	-1.91	2.43	327	THIRD
74.90	0.75	2.17*	0.94	326	FOURTH
72.91	1.09	0.18	1.20	213	FIFTH
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE A. ----					
70.98	2.25	-1.75	2.31	44	VERY SATISFIED
73.42	1.47	0.69	1.12	757	SATISFIED
71.72	0.94	-1.01	0.69	1112	DISSATISIFED
76.04	0.85	3.31*	1.07	121	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE B. ----					
74.33	2.06	1.60	2.07	92	VERY SATISFIED
72.24	1.28	-0.49	0.95	827	SATISFIED
72.34	1.10	-0.39	0.81	991	DISSATISIFED
74.93	1.77	2.20	1.82	124	VERY DISSATISFIE



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          NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
        MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13-YEAR OLDS SPRING 1978

              OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

            SE OF     GROUP     SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT    SIZE            REPORTING GROUP

 72.73      0.71                         2238            ALL STUDENTS

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE C. ----
 74.30      2.27      1.57      2.31      50             VERY SATISFIED
 73.05      1.35      0.32      1.04     740             SATISFIED
 71.98      0.99     -0.75      0.68    1153             DISSATISIFED
 75.94      0.73      3.21*     0.98      98             VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE D. ----
 80.30      0.78      7.57*     1.05      23             VERY SATISFIED
 73.29      0.95      0.56      0.64    1269             SATISFIED
 71.26      1.41     -1.47      1.15     642             DISSATISIFED
 76.55      0.48      3.82*     0.85      75             VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE E. ----
 76.39      1.22      3.66*     1.34     143             VERY SATISFIED
 72.53      0.93     -0.20      0.56    1319             SATISFIED
 72.43      1.72     -0.30      1.46     521             DISSATISIFED
 70.70      1.75     -2.03      1.86      50             VERY DISSATISFIE

----IS YOUR SCHOOL AN ESEA TITLE I SCHOOL?  ----
 70.32      1.18     -2.41*     0.81     985             YES
 74.62      0.86      1.89*     0.73    1073             NO

----PARENTAL SUPPORT OF YOUR SCHOOL?             ----
 74.47      1.37      1.74      1.06     703             EXCELLENT
 74.14      0.69      1.41      0.79     849             GOOD
 69.49      1.49     -3.24*     1.36     436             AVERAGE
 66.17      4.15     -6.56      4.04      66             FAIR
 54.88      1.27    -17.85*     1.44      25             POOR

----ATTITUDE OF STUDENTS TOWARD SCHOOL?          ----
 74.33      1.77      1.60      1.52     448             EXCELLENT
 74.25      0.72      1.52*     0.75     996             GOOD
 67.97      1.47     -4.76*     1.23     592             AVERAGE
 74.27      1.41      1.55      1.53      50             FAIR
  0.0       0.0     -72.73*     0.71       0             POOR

----ATTENDANCE FIRST QUARTER                     ----
 70.11      1.15     -2.62*     0.73    1061             LOW
 75.59      0.67      2.86*     0.75     951             HIGH

----ATTENDANCE SECOND QUARTER                    ----
 69.70      1.39     -3.03*     0.97     840             LOW
 74.95      0.65      2.22*     0.69    1150             HIGH
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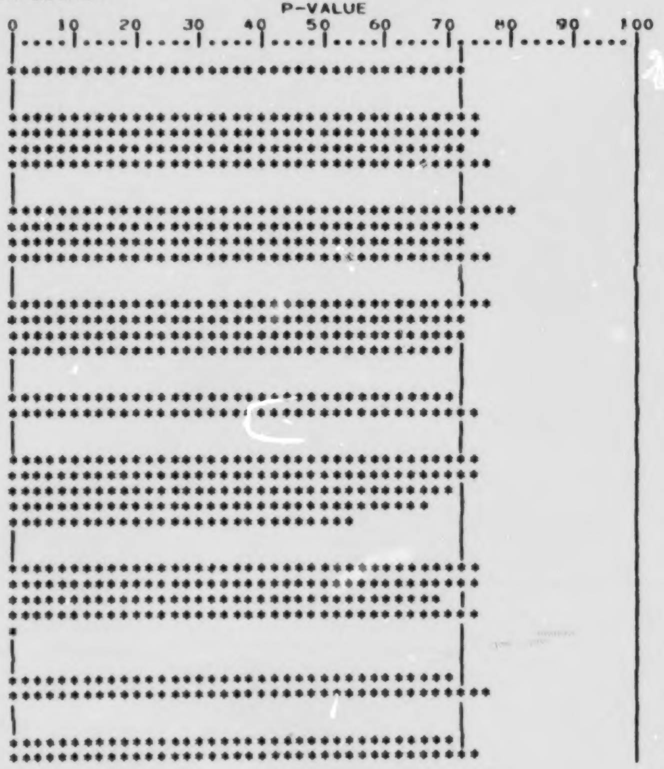

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               NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
              MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

                  OBJECTIVE 5. PERSONAL ATTITUDES AND VALUES CONTRIBUTING TO SUCCESS

           SE OF     GROUP     SE OF    SAMPLE
P-VALUE   P VALUE   EFFECT    EFFECT     SIZE             REPORTING GROUP

 69.85     0.61                          2238             ALL STUDENTS

----SEX OF THE STUDENT                           ----
 68.64     0.72     -1.21*     0.35     1044              MALE
 70.90     0.67      1.05*     0.32     1191              FEMALE

----GRADE OF THE STUDENT                         ----
 55.54     5.07    -14.31*     4.94       14              6TH GRADE
 65.28     1.10     -4.57*     1.07      291              7TH GRADE
 70.67     0.62      0.82*     0.16     1920              8TH GRADE
 72.06     4.28      2.21      4.29        9              9TH GRADE
 88.00     0.0      18.15*     0.60        1              10TH GRADE

----HOW DO YOU FEEL ABOUT SCHOOL?                ----
 65.19     1.72     -4.66*     1.51      104              STRONGLY DISLIKE
 66.62     0.86     -3.23*     0.72      307              DISLIKE
 69.06     0.71     -0.79      0.42      882              SCHOOL IS OK
 72.60     0.67      2.75*     0.40      840              LIKE
 69.26     2.24     -0.59      1.89      103              STRONGLY LIKE

----HOMEWORK - DRILL WORK                        ----
 71.40     0.63      1.55*     0.31     1181              DAILY
 68.31     0.71     -1.54*     0.46      766              WEEKLY
 67.58     1.37     -2.27*     1.08      278              MONTHLY

----HOMEWORK - READING ASSIGNED MATERIAL         ----
 70.43     0.99      0.58      0.71      436              DAILY
 70.53     0.76      0.68      0.44      919              WEEKLY
 69.03     0.68     -0.82      0.45      873              MONTHLY

----HOMEWORK - WRITING ON ASSIGNED TOPICS        ----
 67.83     2.26     -2.02      2.02       79              DAILY
 70.97     0.92      1.12*     0.57      504              WEEKLY
 69.60     0.58     -0.25      0.21     1647              MONTHLY
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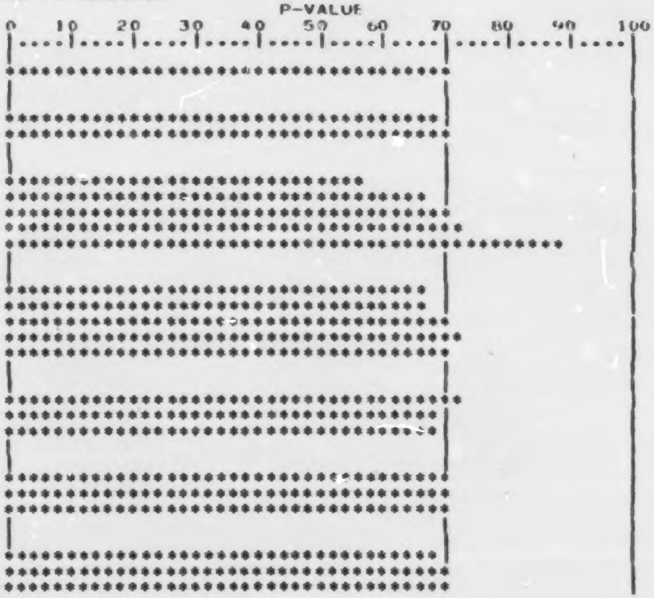

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                      NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                    MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

                        OBJECTIVE 5. PERSONAL ATTITUDES AND VALUES CONTRIBUTING TO SUCCESS
                                                                                                   P-VALUE
           SE OF   GROUP    SE OF   SAMPLE                                                     0    10   20   30   40   50   60   70   80   90   100
P-VALUE   P-VALUE  EFFECT   EFFECT   SIZE          REPORTING GROUP                             |....|....|....|....|....|....|....|....|....|....|
                                                                                             |                                  |              |
 69.85     0.61                      2238          ALL STUDENTS                              ************************************              |
                                                                                             |                                  |              |
----HOMEWORK - WORK ON YOUR OWN             ----                                             |                                  |              |
 64.21     2.05     -5.64*   1.76     114          DAILY                                     *********************************  |              |
 68.49     0.90     -1.36*   0.65     402          WEEKLY                                    ***********************************|              |
 70.63     0.57      0.78*   0.22    1709          MONTHLY                                   ************************************              |
                                                                                             |                                  |              |
----TALKED WITH CAREER OR GUIDANCE COUNSELOR----                                             |                                  |              |
 68.91     0.93     -0.95    0.64     550          YES                                       ***********************************|              |
 70.33     0.58      0.48*   0.23    1669          NO                                        ************************************              |
                                                                                             |                                  |              |
----TALKED WITH PARENT                      ----                                             |                                  |              |
 70.09     0.64      0.24    0.16    1930          YES                                       ************************************              |
 69.28     1.01     -0.57    0.93     298          NO                                        ************************************              |
                                                                                             |                                  |              |
----TLAKED WITH FRIEND                      ----                                             |                                  |              |
 69.82     0.60     -0.03    0.19    1734          YES                                       ************************************              |
 70.68     0.91      0.83    0.65     487          NO                                        ************************************              |
                                                                                             |                                  |              |
----TALKED WITH PERSON IN INTERESTING JOB   ----                                             |                                  |              |
 68.60     0.82     -1.25*   0.43     750          YES                                       ***********************************|              |
 70.77     0.56      0.92*   0.25    1458          NO                                        ************************************              |
                                                                                             |                                  |              |
----TALKED WITH TEACHER                     ----                                             |                                  |              |
 69.17     1.21     -0.68    0.91     334          YES                                       ************************************              |
 70.18     0.56      0.33    0.19    1878          NO                                        ************************************              |
                                                                                             |                                  |              |
----DID YOU EVER TAKE A CAREER TEST ?       ----                                             |                                  |              |
 71.78     0.99      1.93*   0.66     542          YES                                       *************************************             |
 70.08     0.60      0.23    0.35    1185          NO                                        ************************************              |
 67.49     0.87     -2.36*   0.58     506          I DON'T KNOW                              ***********************************|              |
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NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT CUD 13 YEAR OLDS SPRING 1978

OBJECTIVE 5. PERSONAL ATTITUDES AND VALUES CONTRIBUTING TO SUCCESS

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           SE OF     GROUP     SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT   SIZE              REPORTING GROUP

 69.85      0.61                        2238              ALL STUDENTS

----ARE FIELD TRIPS USEFUL?                        ----
 70.09      0.60      0.23*     0.09    1982              YES
 68.43      1.06     -1.42      0.81     227              NO
 67.50      1.60     -2.35      1.64      27              NEVER GONE

----SCHOOLING HELPS YOU THINK ABOUT WORK?          ----
 69.78      0.89     -0.07      0.67     348              NOT VERY USEFUL
 70.97      0.59      1.12*     0.36    1162              SOMEWHAT USEFUL
 69.48      0.95     -0.37      0.56     520              VERY USEFUL
 64.80      1.39     -5.05*     1.13     205              I DON'T KNOW

----HOW MUCH ARE YOUR PARENTS INVOLVED?            ----
 67.32      1.16     -2.53*     0.95     247              HARDLY AT ALL
 69.74      0.71     -0.11      0.51     616              ONLY A LITTLE
 70.94      0.65      1.09*     0.40     900              QUITE A BIT
 69.32      1.10     -0.53      0.70     473              A LOT

----FAMILY OCCUPATIONAL STATUS                     ----
 70.80      0.75      0.95*     0.31    1188              HIGH
 70.27      0.61      0.42      0.57     606              MEDIUM
 66.86      1.58     -2.99*     1.45     158              LOW
 68.86      1.19     -0.99      0.98     212              UNKNOWN
 60.08      2.19     -9.77*     2.13      72              NONE

----DO YOU WANT A JOB LISTED IN QUESTION 18?----
 70.50      0.83      0.65      0.37    1160              YES
 67.98      0.68     -1.87*     0.56     656              NO
 71.05      0.73      1.20      0.65     417              I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 20?----
 66.68      0.88     -3.17*     0.52     680              YES
 71.21      0.64      1.36*     0.31    1154              NO
 71.45      0.88      1.60*     0.79     401              I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 22?----
 64.78      1.32     -5.07*     1.03     246              YES
 70.72      0.59      0.87*     0.22    1741              NO
 68.82      1.21     -1.03      1.04     248              I DON'T KNOW
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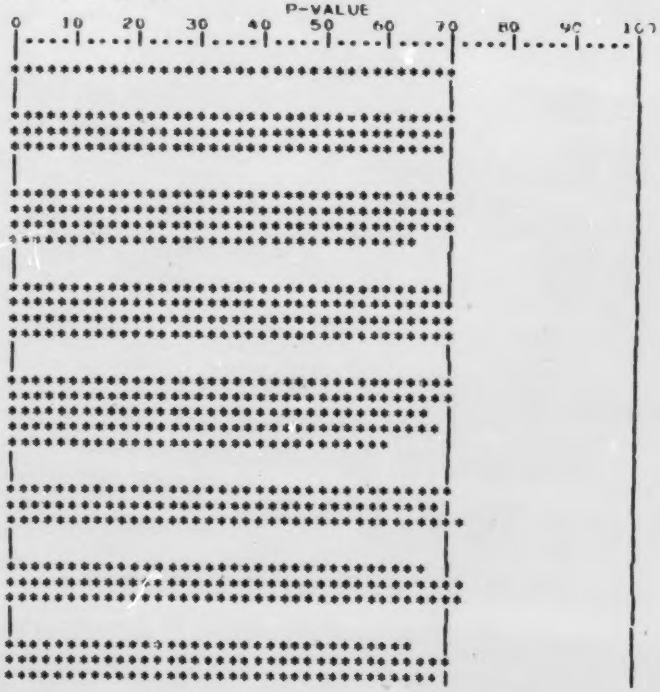

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                    NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                  MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13 YEAR OLDS  SPRING 1978

                      OBJECTIVE 5. PERSONAL ATTITUDES AND VALUES CONTRIBUTING TO SUCCESS

               SE OF     GROUP      SE OF   SAMPLE
 P-VALUE     P-VALUE    EFFECT     EFFECT    SIZE          REPORTING GROUP

  69.85       0.61                           2238          ALL STUDENTS

----HOW SURE ARE YOU ABOUT FUTURE JOB?              ----
  66.91       0.96      -0.94       0.60      506          NOT VERY SURE
  70.81       0.58       0.96*      0.40     1023          SOMEWHAT SURE
  69.15       0.90      -0.70       0.55      706          VERY SURE

----PARENTS WANT YOU TO GO TO COLLEGE?              ----
  64.28       1.07      -5.57*      1.05      149          HARDLY AT ALL
  67.30       0.92      -2.55*      0.87      278          ONLY A LITTLE
  69.83       0.66      -0.02       0.42      771          QUITE A BIT
  71.42       0.82       1.57*      0.39     1022          A LOT

----WHAT DO YOU PLAN TO DO?                         ----
  65.89       1.23      -3.96*      1.12      199          FULL-TIME JOB
  60.68       2.11      -9.17*      1.97       65          JOB-SCHOOL
  68.71       0.74      -1.14       0.67      281          SPECIAL TRAINING
  69.74       1.68      -0.11       1.59       70          2-YEAR COLLEGE
  73.19       0.66       3.34*      0.34      910          4-YEAR COLLEGE
  68.12       0.70      -1.73*      0.46      704          DON'T KNOW

----HAVE YOU EVER DONE REGULAR WORK?                ----
  69.99       0.60       0.14       0.12     1999          YES
  69.02       1.17      -0.83       0.93      233          NO

----KIND OF COMMUNITY                               ----
  63.40       1.32      -6.45*      1.12      450          BIG CITIES
  69.83       1.07      -0.02       1.08      342          INDUSTRIAL
  73.13       0.57       3.28*      0.65      847          RESIDENTIAL
  69.95       0.84       0.10       0.84      599          OTHER

----REGION OF THE STATE                             ----
  66.82       1.71      -1.03       1.29      598          BOSTON
  69.73       1.39      -0.12       1.19      444          NORTHEAST
  72.18       0.92       2.33*      1.06      204          PITTSFIELD
  69.85       0.59       0.01       0.76      385          SOUTHEAST
  69.59       1.32      -0.26       1.34      235          SPRINGFIELD
  71.15       0.83       1.30       0.91      372          WORCESTER
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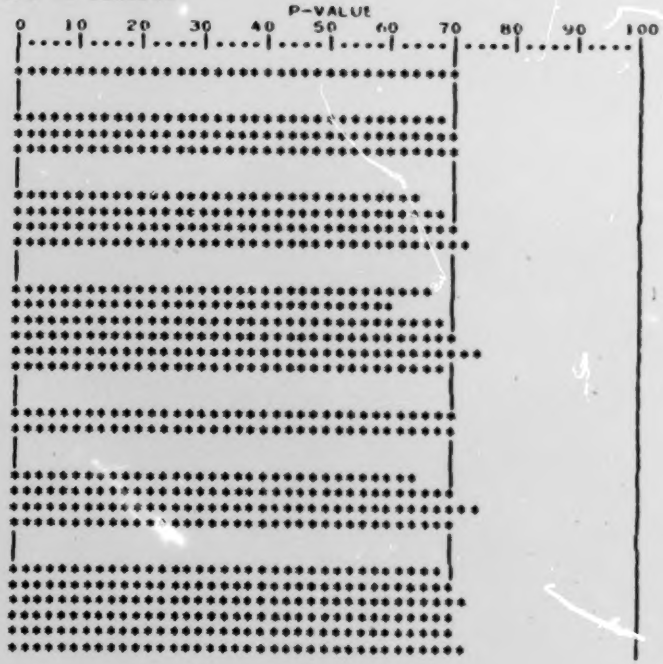

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NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13-YEAR OLDS SPRING 1978

OBJECTIVE 5. PERSONAL ATTITUDES AND VALUES CONTRIBUTING TO SUCCESS

           SE OF     GROUP     SE OF   SAMPLE
P-VALUE  P-VALUE    EFFECT    EFFECT    SIZE              REPORTING GROUP

 69.85     0.61                          2238              ALL STUDENTS

----EMPHASIS ON OBJECTIVE A.                     ----
 71.98     0.76      2.13*     0.90      228               FIRST
 68.79     1.43     -1.06      1.25      429               SECOND
 71.15     0.60      1.30      0.76      406               THIRD
 70.75     1.52      0.90      1.47      237               FOURTH
 68.63     1.35     -1.22      0.98      757               FIFTH

----EMPHASIS ON OBJECTIVE B.                     ----
 71.42     0.77      1.57      0.85      398               FIRST
 69.67     1.10     -0.18      1.03      481               SECOND
 69.29     1.54     -0.56      1.31      446               THIRD
 69.46     1.29     -0.39      1.02      681               FOURTH
 65.97     5.24     -3.89      5.14       49               FIFTH

----EMPHASIS ON OBJECTIVE C.                     ----
 71.15     1.06      1.29      1.14      185               FIRST
 70.68     1.92      0.83      1.71      326               SECOND
 70.24     1.01      0.38      0.80      808               THIRD
 67.49     1.54     -2.37      1.35      410               FOURTH
 70.14     1.00      0.29      1.03      352               FIFTH

----EMPHASIS ON OBJECTIVE D.                     ----
 68.24     1.06     -1.61      0.92      593               FIRST
 69.80     1.86     -0.05      1.64      400               SECOND
 68.02     2.92     -1.83      2.66      235               THIRD
 71.85     1.00      2.00      1.03      285               FOURTH
 71.22     0.74      1.37      0.79      566               FIFTH

----EMPHASIS ON OBJECTIVE E.                     ----
 69.63     1.63     -0.22      1.28      604               FIRST
 69.49     0.96     -0.37      0.87      611               SECOND
 67.96     1.85     -1.89      1.68      327               THIRD
 71.70     0.58      1.85*     0.77      326               FOURTH
 71.17     1.01      1.32      1.09      213               FIFTH

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE A. ----
 69.00     0.74     -0.85      0.94       44               VERY SATISFIED
 70.37     1.16      0.52      0.91      757               SATISFIED
 69.09     0.84     -0.76      0.58     1112               DISSATISIFED
 73.19     1.84      3.34      1.85      121               VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE B. ----
 71.37     1.21      1.51      1.29       92               VERY SATISFIED
 69.91     1.01      0.06      0.79      827               SATISFIED
 69.04     0.96     -0.81      0.68      991               DISSATISIFED
 73.84     1.60      3.99*     1.64      124               VERY DISSATISFIE
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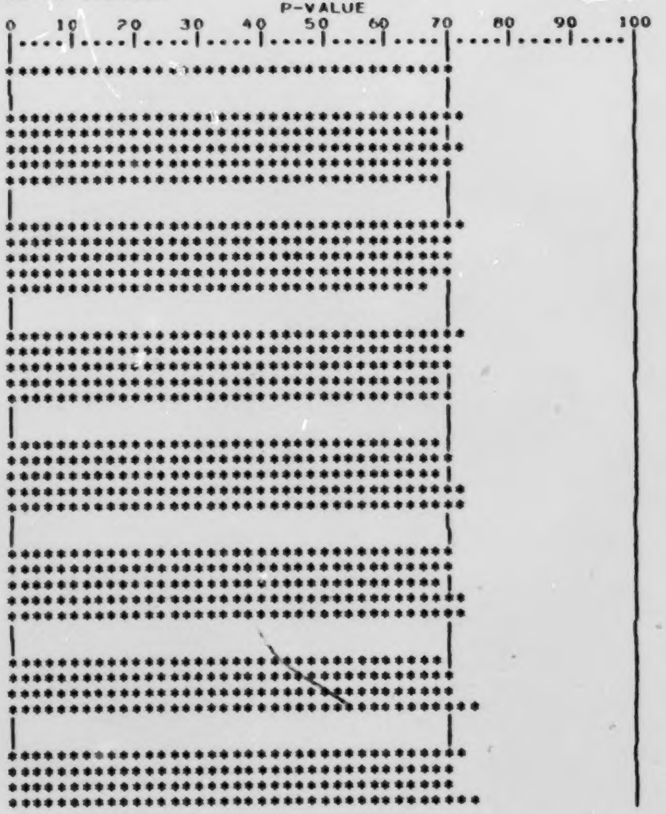
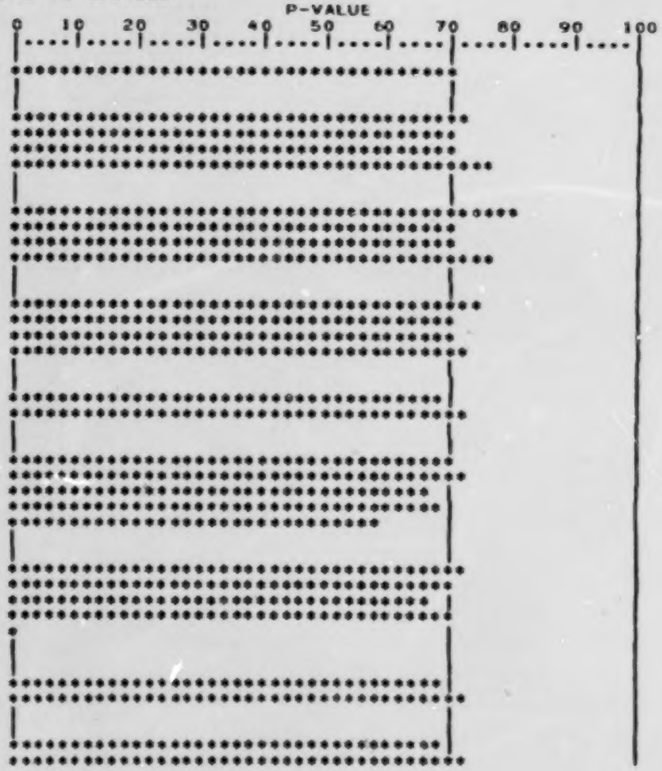


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 13-YEAR OLDS SPRING 1978

OBJECTIVE 5. PERSONAL ATTITUDES AND VALUES CONTRIBUTING TO SUCCESS

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
69.85	0.61			2238	ALL STUDENTS
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE C. ----					
71.20	1.31	1.34	1.40	50	VERY SATISFIED
70.09	1.22	0.24	0.91	740	SATISFIED
69.21	0.77	-0.65	0.58	1153	DISSATISIFED
75.32	1.66	5.47*	1.68	96	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE D. ----					
79.57	0.63	9.71*	0.87	23	VERY SATISFIED
69.78	0.85	-0.07	0.53	1269	SATISFIED
69.03	1.01	-0.82	0.88	642	DISSATISIFED
76.47	1.48	6.62*	1.55	75	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE E. ----					
74.52	1.10	4.67*	1.19	143	VERY SATISFIED
69.27	0.78	-0.58	0.48	1319	SATISFIED
70.06	1.39	0.21	1.19	521	DISSATISIFED
71.17	0.49	1.32	0.77	50	VERY DISSATISFIE
----IS YOUR SCHOOL AN ESEA TITLE I SCHOOL? ----					
68.00	0.93	-1.85*	0.66	985	YES
71.47	0.78	1.62*	0.62	1073	NO
----PARENTAL SUPPORT OF YOUR SCHOOL? ----					
70.82	1.07	0.97	0.87	703	EXCELLENT
71.88	0.55	2.03*	0.66	649	GOOD
66.10	1.52	-3.75*	1.31	438	AVERAGE
67.23	2.77	-2.62	2.73	66	FAIR
58.04	1.26	-11.81*	1.38	25	POOR
----ATTITUDE OF STUDENTS TOWARD SCHOOL? ----					
71.65	1.38	1.80	1.21	448	EXCELLENT
70.96	0.69	1.11	0.65	996	GOOD
66.21	1.22	-3.65*	1.01	592	AVERAGE
70.77	1.46	0.92	1.53	50	FAIR
0.0	0.0	-69.85*	0.60	0	POOR
----ATTENDANCE FIRST QUARTER ----					
67.71	0.93	-2.14*	0.59	1061	LOW
72.49	0.60	2.64*	0.62	951	HIGH
----ATTENDANCE SECOND QUARTER ----					
67.79	1.18	-2.06*	0.82	840	LOW
71.64	0.60	1.79*	0.59	1150	HIGH



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                    NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                   MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

                TOTAL TEST SCORE

             SE OF     GROUP      SE OF   SAMPLE
P-VALUE    P-VALUE    EFFECT     EFFECT    SIZE                REPORTING GROUP

 72.05      0.67                           2201                ALL STUDENTS

----SEX OF THE STUDENT                                 ----
 70.85      0.83      -1.19*      0.31     1071                MALE
 73.23      0.62       1.19*      0.34     1124                FEMALE

----GRADE OF THE STUDENT                               ----
 50.83      2.67     -21.22*      2.57       34                9TH GRADE
 60.13      1.64     -11.92*      1.23      168                10TH GRADE
 73.03      0.49       1.03*      0.31     1421                11TH GRADE
 74.53      0.57       2.48*      0.53      575                12TH GRADE

----HOW DO YOU FEEL ABOUT SCHOOL?                      ----
 67.07      1.51      -4.98*      1.28      131                STRONGLY DISLIKE
 69.79      0.96      -2.25*      0.74      222                DISLIKE
 70.04      0.73      -2.01*      0.34      740                SCHOOL IS OK
 74.57      0.64       2.52*      0.27      980                LIKE
 73.85      1.79       1.80       1.55      124                STRONGLY LIKE

----HOMEWORK - DRILL WORK                              ----
 74.77      0.43       2.72*      0.36     1078                DAILY
 69.20      1.17      -2.85*      0.67      536                WEEKLY
 69.74      0.90      -2.31*      0.56      576                MONTHLY

----HOMEWORK - READING ASSIGNED MATERIAL               ----
 74.32      0.54       2.28*      0.37      949                DAILY
 71.69      0.61      -0.35       0.33      821                WEEKLY
 67.84      0.96      -4.21*      0.59      420                MONTHLY

----HOMEWORK - WRITING ON ASSIGNED TOPICS              ----
 71.35      1.25      -0.70       1.12      113                DAILY
 74.26      0.62       2.21*      0.39      745                WEEKLY
 70.93      0.77      -1.11*      0.28     1331                MONTHLY

----HOMEWORK - WORK ON YOUR OWN                        ----
 67.77      1.57      -4.28*      1.15      176                DAILY
 70.17      1.16      -1.88*      0.66      396                WEEKLY
 72.96      0.53       0.92*      0.25     1621                MONTHLY
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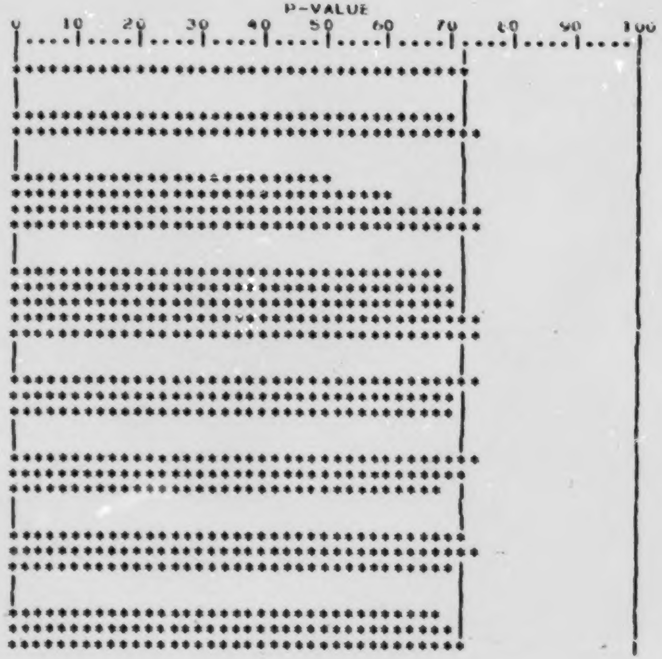

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NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

TOTAL TEST SCORE

          SE OF     GROUP      SE OF   SAMPLE
P-VALUE  P-VALUE   EFFECT     EFFECT    SIZE          REPORTING GROUP

 72.05     0.67                         2201          ALL STUDENTS

----TALKED WITH CAREER OR GUIDANCE COUNSELOR----
 73.55     0.56      1.51*     0.27     1345          YES
 70.22     0.85     -1.83*     0.41      828          NO

----TALKED WITH PARENT                          ----
 72.61     0.61      0.56*     0.12     1967          YES
 68.73     1.15     -3.32*     0.79      212          NO

----TLAKED WITH FRIEND                          ----
 72.82     0.60      0.77*     0.17     1870          YES
 69.09     1.08     -2.95*     0.62      301          NO

----TALKED WITH PERSON IN INTERESTING JOB       ----
 72.20     0.80      0.15      0.29     1045          YES
 72.41     0.56      0.37      0.30     1112          NO

----TALKED WITH TEACHER                         ----
 73.74     0.72      1.69*     0.29      810          YES
 71.43     0.64     -0.62*     0.25     1350          NO

----DID YOU EVER TAKE A CAREER TEST?            ----
 74.02     0.50      1.97*     0.39     1123          YES
 70.72     0.88     -1.33*     0.38      811          NO
 68.46     1.22     -3.59*     0.83      260          I DON'T KNOW

----ARE FIELD TRIPS USEFUL?                     ----
 72.49     0.61      0.44*     0.15     1887          YES
 70.72     1.08     -1.33      0.73      213          NO

----SCHOOLING HELPS YOU THINK ABOUT WORK?       ----
 70.03     0.77     -2.01*     0.63      269          NOT VERY USEFUL
 71.81     0.67     -0.24      0.25     1062          SOMEWHAT USEFUL
 73.42     0.92      1.38*     0.41      691          VERY USEFUL
 71.31     1.18     -0.74      0.99      174          I DON'T KNOW
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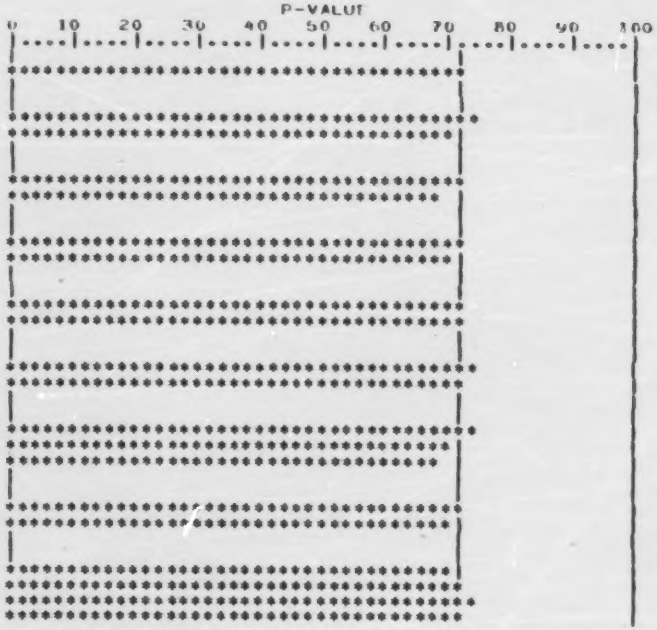

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          NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
         MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

                         TOTAL TEST SCORE

           SE OF     GROUP      SE OF   SAMPLE
P-VALUE  P-VALUE   EFFECT     EFFECT    SIZE               REPORTING GROUP

 72.05     0.67                         2201               ALL STUDENTS

----HOW MUCH ARE YOUR PARENTS INVOLVED?         ----
 70.63     0.74     -1.42*     0.48      406               HARDLY AT ALL
 72.18     0.55      0.13      0.40      728               ONLY A LITTLE
 72.16     0.98      0.11      0.44      734               QUITE A BIT
 73.14     0.98      1.10      0.59      329               A LOT

----FAMILY OCCUPATIONAL STATUS                  ----
 73.14     0.61      1.09*     0.23     1185               HIGH
 72.56     0.56      0.51      0.40      641               MEDIUM
 69.12     1.04     -2.93*     0.87      151               LOW
 67.23     1.68     -4.82*     1.48      138               UNKNOWN
 65.86     2.24     -6.19*     1.83       84               NONE

----DO YOU WANT A JOB LISTED IN QUESTION 18?----
 73.07     0.86      1.02*     0.31     1218               YES
 70.10     0.65     -1.95*     0.47      623               NO
 71.83     0.72     -0.22      0.61      357               I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 20?----
 67.89     0.96     -4.16*     0.47      706               YES
 74.33     0.58      2.28*     0.30     1146               NO
 73.04     0.62      1.00      0.58      343               I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 22?----
 64.94     1.50     -7.11*     1.09      160               YES
 72.94     0.63      0.89*     0.14     1838               NO
 69.15     0.99     -2.90*     0.78      199               I DON'T KNOW

----HOW SURE ARE YOU ABOUT FUTURE JOB?          ----
 71.50     0.78     -0.55      0.43      472               NOT VERY SURE
 72.34     0.67      0.30      0.24      948               SOMEWHAT SURE
 71.98     0.81     -0.07      0.35      777               VERY SURE

----PARENTS WANT YOU TO GO TO COLLEGE?          ----
 65.80     0.93     -6.24*     0.95      179               HARDLY AT ALL
 67.35     0.78     -4.69*     0.54      335               ONLY A LITTLE
 72.09     0.65      0.04      0.32      764               QUITE A BIT
 75.08     0.73      3.03*     0.32      908               A LOT

----WHAT DO YOU PLAN TO DO?                     ----
 66.46     0.92     -5.59*     0.60      315               FULL-TIME JOB
 68.21     1.33     -3.84*     0.98      111               JOB-SCHOOL
 69.41     1.15     -2.64*     0.76      257               SPECIAL TRAINING
 71.73     0.70     -0.31      0.76      211               2-YEAR COLLEGE
 77.28     0.42      5.23*     0.44      881               4-YEAR COLLEGE
 67.79     0.90     -4.26*     0.56      398               DON'T KNOW
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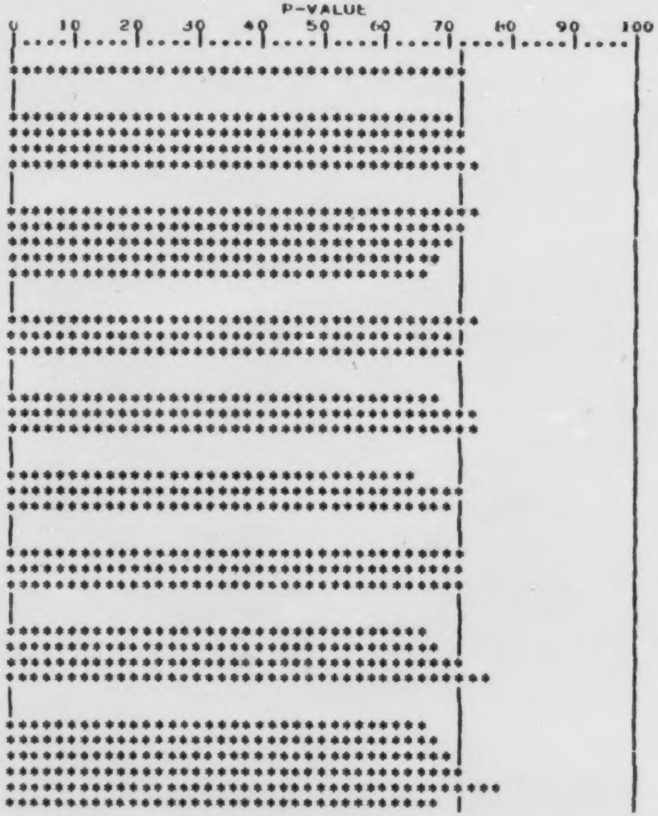

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        NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
      MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

            TOTAL TEST SCORE

           SE OF     GROUP     SE OF    SAMPLE
P-VALUE   P-VALUE   EFFECT    EFFECT     SIZE             REPORTING GROUP

 72.05     0.67                          2201             ALL STUDENTS

----HOW MANY TIMES DISCUSSED WITH COUNSELOR?----
 69.24     0.87     -2.81*     0.45      668              NONE
 73.06     0.65      1.01*     0.38      893              A FEW
 74.56     0.73      2.51*     0.46      582              SEVERAL
 64.77     1.82     -7.28*     1.71       49              DON'T KNOW

----HAVE YOU EVER DONE REGULAR WORK?            ----
 72.52     0.58      0.47*     0.15     2080              YES
 64.59     2.53     -7.46*     2.06      116              NO

----HAVE YOU EVER DONE VOLUNTEER WORK?          ----
 72.82     0.84      0.77*     0.38      651              YES
 71.71     0.65     -0.34*     0.17     1532              NO

----HAVE YOU EVER PARTICIPATED IN WORK STUDY----
 69.28     1.22     -2.76*     0.79      362              YES
 72.69     0.60      0.64*     0.20     1793              NO

----WHICH BEST DESCRIBES YOUR PROGRAM?          ----
 69.34     0.84     -2.70*     0.68      299              GENERAL
 65.44     1.08     -6.61*     0.90      267              VOCATIONAL
 76.60     0.35      4.55*     0.48     1161              COLLEGE
 67.77     1.35     -4.27*     0.93      290              BUSINESS
 63.74     1.30     -8.31*     0.98      172              DON'T KNOW

----KIND OF COMMUNITY                           ----
 64.98     2.36     -7.07*     1.98      381              BIG CITIES
 69.54     1.60     -2.51      1.51      289              INDUSTRIAL
 75.37     0.36      3.33*     0.66      943              RESIDENTIAL
 72.13     0.67      0.08      0.82      588              OTHER

----REGION OF THE STATE                         ----
 69.96     1.95     -2.09      1.41      563              BOSTON
 73.59     1.00      1.55      1.00      431              NORTHEAST
 74.14     0.73      2.10*     0.96      208              PITTSFIELD
 71.84     0.87     -0.21      0.97      375              SOUTHEAST
 73.16     1.54      1.11      1.54      211              SPRINGFIELD
 72.66     0.56      0.61      0.80      413              WORCESTER
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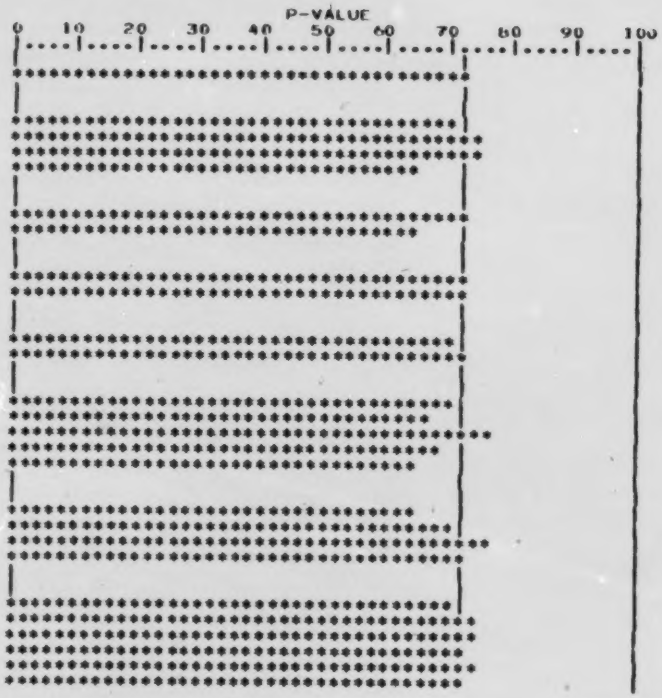

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                   NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                 MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17-YEAR OLDS SPRING 1978

                        TOTAL TEST SCORE

            SE OF      GROUP       SE OF    SAMPLE
P-VALUE   P-VALUE     EFFECT      EFFECT     SIZE                REPORTING GROUP

 72.05      0.67                             2201                ALL STUDENTS

----EMPHASIS ON OBJECTIVE A.                            ----
 72.75      0.97       0.70        1.04      336                 FIRST
 72.63      1.51       0.58        1.36      416                 SECOND
 74.02      0.95       1.97        1.05      314                 THIRD
 69.97      3.23      -2.08        2.15      298                 FOURTH
 71.61      0.95      -0.44        0.84      766                 FIFTH

----EMPHASIS ON OBJECTIVE B.                            ----
 72.52      1.15       0.47        1.01      592                 FIRST
 72.67      1.15       0.62        1.15      388                 SECOND
 72.67      0.70       0.63        0.86      428                 THIRD
 70.34      1.76      -1.70        1.32      621                 FOURTH
 76.41      0.97       4.36*       1.14      101                 FIFTH

----EMPHASIS ON OBJECTIVE C.                            ----
 70.37      1.95      -1.68        1.90      188                 FIRST
 73.50      0.69       1.45        0.87      380                 SECOND
 71.68      1.47      -0.37        1.04      776                 THIRD
 72.65      1.10       0.61        1.02      541                 FOURTH
 71.41      1.92      -0.64        1.85      245                 FIFTH

----EMPHASIS ON OBJECTIVE D.                            ----
 73.17      1.04       1.13        1.03      468                 FIRST
 70.42      1.76      -1.63        1.34      605                 SECOND
 69.52      1.84      -2.53        1.72      294                 THIRD
 74.26      1.07       2.21*       1.09      365                 FOURTH
 73.51      0.83       1.46        0.95      398                 FIFTH

----EMPHASIS ON OBJECTIVE E.                            ----
 70.97      1.10      -1.08        1.01      587                 FIRST
 71.75      1.88      -0.29        1.49      515                 SECOND
 73.92      1.39       1.87        1.34      245                 THIRD
 70.55      1.32      -1.50        1.36      216                 FOURTH
 73.24      1.10       1.19        1.06      467                 FIFTH

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE A. ----
 71.92      0.49      -0.13        0.82       25                 VERY SATISFIED
 72.74      0.78       0.69        0.67     1088                 SATISFIED
 71.56      1.23      -0.48        0.84      917                 DISSATISIFED
 70.08      2.70      -1.97        2.65      100                 VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE B. ----
 70.25      1.33      -1.79        1.41      132                 VERY SATISFIED
 73.11      0.82       1.06        0.72      993                 SATISFIED
 71.67      1.21      -0.38        0.81      946                 DISSATISIFED
 66.39      3.17      -5.65        3.14       59                 VERY DISSATISFIE
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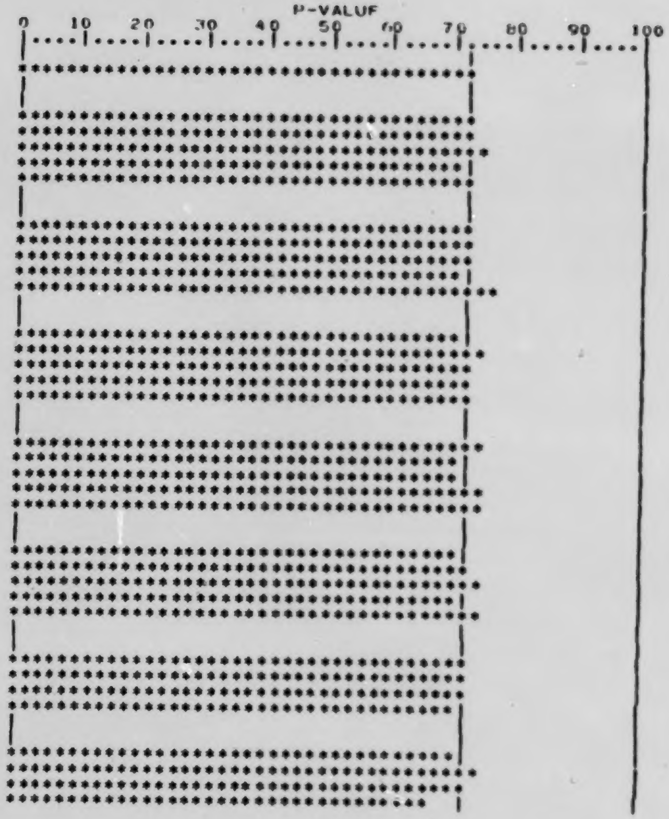

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          NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
        MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17-YEAR OLDS SPRING 1978

                   TOTAL TEST SCORE

            SE OF     GROUP     SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT    SIZE             REPORTING GROUP

 72.05      0.67                         2201             ALL STUDENTS

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE C. ----
 76.40      0.38      4.35*     0.77       25             VERY SATISFIED
 72.71      0.59      0.67      0.66     1121             SATISFIED
 71.51      1.36     -0.54      0.66      910             DISSATISIFED
 69.22      3.10     -2.83      3.05       74             VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE D. ----
 72.02      1.87     -0.03      1.85      137             VERY SATISFIED
 72.02      0.92     -0.03      0.52     1322             SATISFIED
 71.98      1.15     -0.07      1.01      629             DISSATISIFED
 76.05      2.21      4.00      2.24       42             VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE E. ----
 76.53      0.57      4.48*     0.84      143             VERY SATISFIED
 71.68      1.00     -0.37      0.58     1198             SATISFIED
 71.73      1.06     -0.32      0.94      667             DISSATISIFED
 74.18      1.62      2.13      1.67       81             VERY DISSATISFIE

----IS YOUR SCHOOL AN ESEA TITLE 1 SCHOOL?    ----
 70.66      0.99     -1.39      0.79      885             YES
 73.14      1.04      1.09      0.70     1077             NO

----PARENTAL SUPPORT OF YOUR SCHOOL?          ----
 74.29      1.36      2.24      1.35      271             EXCELLENT
 72.31      0.96      0.27      0.63     1208             GOOD
 71.27      1.47     -0.78      1.31      460             AVERAGE
 71.00      3.05     -1.05      2.94      128             FAIR
 66.93      1.32     -5.11*     1.43       63             POOR

----ATTITUDE OF STUDENTS TOWARD SCHOOL?       ----
 74.12      1.69      2.07      1.66      192             EXCELLENT
 73.78      0.50      1.73*     0.63     1224             GOOD
 70.15      1.82     -1.89      1.44      550             AVERAGE
 64.52      2.79     -7.53*     2.67      139             FAIR
 64.88      0.56     -7.17*     0.66       25             POOR

----ATTENDANCE FIRST QUARTER                  ----
 68.71      1.62     -3.34*     1.19      629             LOW
 73.51      0.62      1.46*     0.65     1207             HIGH

----ATTENDANCE SECOND QUARTER                 ----
 68.98      1.44     -3.07*     0.97      786             LOW
 73.83      0.52      1.78*     0.66     1060             HIGH

----HOW AVAILABLE ARE CAREER ED PROGRAMS?     ----
 72.06      0.86      0.01      0.45     1450             GENERALLY
 72.19      0.91      0.14      0.97      460             SOMEWHAT
 73.36      3.25      1.32      3.11      130             MINIMALLY
 70.47      3.79     -1.58      3.68       90             NOT AT ALL
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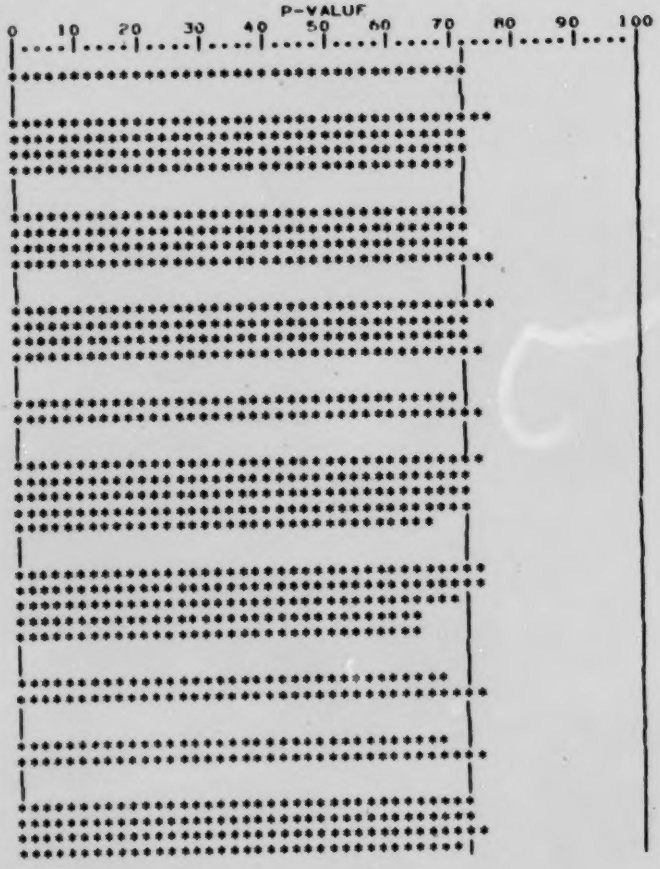

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                    NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                  MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT FOR 17 YEAR OLDS  SPRING 1978

                       OBJECTIVE 1. KNOWLEDGE OF CHARACTERISTICS OF VARIOUS CAREERS

          SE OF     GROUP     SE OF   SAMPLE
P-VALUE  P-VALUE   EFFECT    EFFECT    SIZE               REPORTING GROUP
 68.23     0.41                        2261               ALL STUDENTS
----SEX OF THE STUDENT                             ----
 67.92     0.50     -0.31     0.28     1071               MALE
 68.58     0.48      0.35     0.27     1124               FEMALE
----GRADE OF THE STUDENT                           ----
 55.53     1.92    -12.75*    1.88       34               9TH GRADE
 60.60     0.94     -8.19*    0.84      168               10TH GRADE
 68.78     0.37      0.55*    0.26     1421               11TH GRADE
 70.24     0.55      2.01*    0.46      575               12TH GRADE
----HOW DO YOU FEEL ABOUT SCHOOL?                  ----
 66.01     1.62     -2.23     1.50      131               STRONGLY DISLIKE
 67.87     0.78     -0.36     0.75      222               DISLIKE
 66.45     0.58     -1.64*    0.40      740               SCHOOL IS OK
 69.78     0.49      1.55*    0.32      960               LIKE
 70.48     1.16      2.25*    1.04      124               STRONGLY LIKE
----HOMEWORK - DRILL WORK                          ----
 69.84     0.37      1.61*    0.28     1078               DAILY
 66.34     0.75     -1.90*    0.52      536               WEEKLY
 67.00     0.65     -1.24*    0.48      576               MONTHLY
----HOMEWORK - READING ASSIGNED MATERIAL           ----
 69.73     0.48      1.50*    0.36      949               DAILY
 67.63     0.60     -0.60     0.41      821               WEEKLY
 66.11     0.73     -2.13*    0.60      420               MONTHLY
----HOMEWORK - WRITING ON ASSIGNED TOPICS          ----
 69.25     1.22      1.02     1.09      113               DAILY
 68.69     0.56      0.46     0.39      745               WEEKLY
 67.89     0.46     -0.34     0.25     1331               MONTHLY
----HOMEWORK - WORK ON YOUR OWN                    ----
 65.39     1.17     -2.84*    0.98      176               DAILY
 66.84     0.80     -1.40*    0.60      396               WEEKLY
 68.86     0.37      0.63*    0.19     1621               MONTHLY
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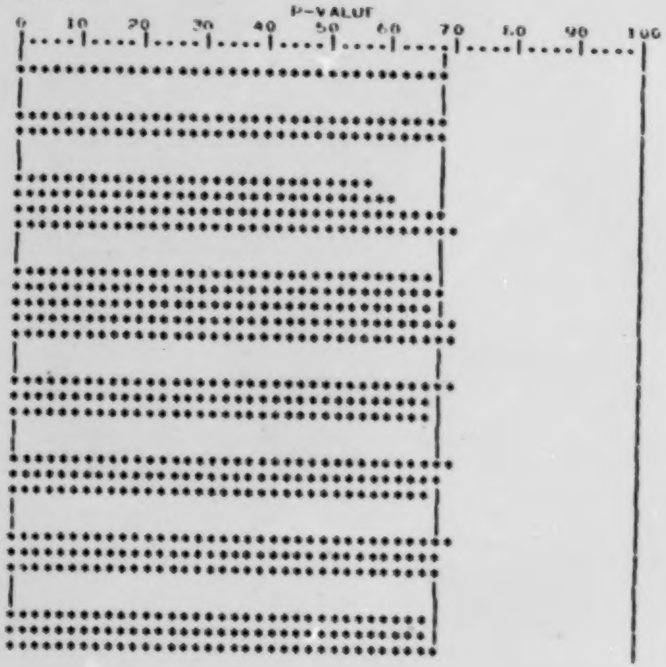

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                NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
              MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

                 OBJECTIVE 1. KNOWLEDGE OF CHARACTERISTICS OF VARIOUS CAREERS

            SE OF     GROUP     SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT    SIZE               REPORTING GROUP

 68.23     0.41                          2201               ALL STUDENTS

----TALKED WITH CAREER OR GUIDANCE COUNSELOR----
 69.36     0.40      1.13*     0.23     1345                YES
 66.67     0.54     -1.36*     0.36      828                NO

----TALKED WITH PARENT                           ----
 68.50     0.39      0.27*     0.11     1967                YES
 67.35     1.01     -0.88      0.89      212                NO

----TLAKED WITH FRIEND                           ----
 68.75     0.39      0.52*     0.15     1870                YES
 66.64     0.80     -1.60*     0.66      301                NO

----TALKED WITH PERSON IN INTERESTING JOB        ----
 68.23     0.51     -0.00      0.30     1045                YES
 68.62     0.44      0.39      0.29     1112                NO

----TALKED WITH TEACHER                          ----
 69.32     0.52      1.09*     0.39      610                YES
 67.87     0.45     -0.37      0.23     1350                NO

----DID YOU EVER TAKE A CAREER TEST?             ----
 69.32     0.41      1.09*     0.27     1123                YES
 67.72     0.55     -0.51      0.35      811                NO
 65.54     0.98     -2.69*     0.81      260                I DON'T KNOW

----ARE FIELD TRIPS USEFUL?                      ----
 68.51     0.39      0.28*     0.13     1887                YES
 67.78     0.87     -0.46      0.74      213                NO

----SCHOOLING HELPS YOU THINK ABOUT WORK?        ----
 67.13     0.60     -1.10      0.71      269                NOT VERY USEFUL
 67.78     0.47     -0.45      0.26     1062                SOMEWHAT USEFUL
 69.59     0.61      1.36*     0.40      691                VERY USFFUL
 67.21     1.12     -1.02      0.96      174                I DON'T KNOW
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          NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
        MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

           OBJECTIVE 1. KNOWLEDGE OF CHARACTERISTICS OF VARIOUS CAREERS

            SE OF     GROUP     SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT    SIZE              REPORTING GROUP

 68.23      0.41                         2201              ALL STUDENTS

----HOW MUCH ARE YOUR PARENTS INVOLVED?           ----
 67.91      0.65     -0.32      0.57      406              HARDLY AT ALL
 68.02      0.50     -0.21      0.38      726              ONLY A LITTLE
 68.11      0.65     -0.12      0.40      734              QUITE A BIT
 69.36      0.83      1.13      0.70      329              A LOT

----FAMILY OCCUPATIONAL STATUS                    ----
 68.94      0.43      0.71*     0.26     1185              HIGH
 68.72      0.52      0.49      0.40      641              MEDIUM
 65.36      1.12     -2.87*     1.13      151              LOW
 67.00      1.48     -1.24      1.31      138              UNKNOWN
 61.41      1.92     -6.82*     1.74       84              NONE

----DO YOU WANT A JOB LISTED IN QUESTION 18?----
 69.33      0.50      1.10*     0.26     1218              YES
 66.45      0.57     -1.78*     0.45      623              NO
 67.50      0.76     -0.74      0.66      357              I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 20?----
 65.70      0.57     -2.53*     0.39      706              YES
 69.84      0.42      1.61*     0.26     1146              NO
 68.13      0.77     -0.10      0.63      343              I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 22?----
 64.22      1.20     -4.01*     1.05      160              YES
 68.86      0.41      0.63*     0.14     1838              NO
 65.48      1.00     -2.75*     0.90      169              I DON'T KNOW

----HOW SURE ARE YOU ABOUT FUTURE JOB?            ----
 68.01      0.62     -0.22      0.53      472              NOT VERY SURE
 68.15      0.50     -0.08      0.29      948              SOMEWHAT SURE
 68.45      0.60      0.22      0.36      777              VERY SURE

----PARENTS WANT YOU TO GO TO COLLEGE?            ----
 65.34      0.96     -2.89*     0.96      179              HARDLY AT ALL
 65.09      0.78     -3.14*     0.68      335              ONLY A LITTLE
 67.76      0.49     -0.47      0.34      764              QUITE A BIT
 70.49      0.48      2.26*     0.27      908              A LOT

----WHAT DO YOU PLAN TO DO?                       ----
 64.16      0.73     -4.07*     0.64      315              FULL-TIME JOB
 66.67      1.25     -1.56      1.12      111              JOB-SCHOOL
 66.69      0.75     -1.54*     0.74      257              SPECIAL TRAINING
 67.45      0.93     -0.78      0.82      211              2-YEAR COLLEGE
 72.01      0.42      3.78*     0.37      881              4-YEAR COLLEGE
 64.79      0.82     -3.44*     0.68      398              DON'T KNOW
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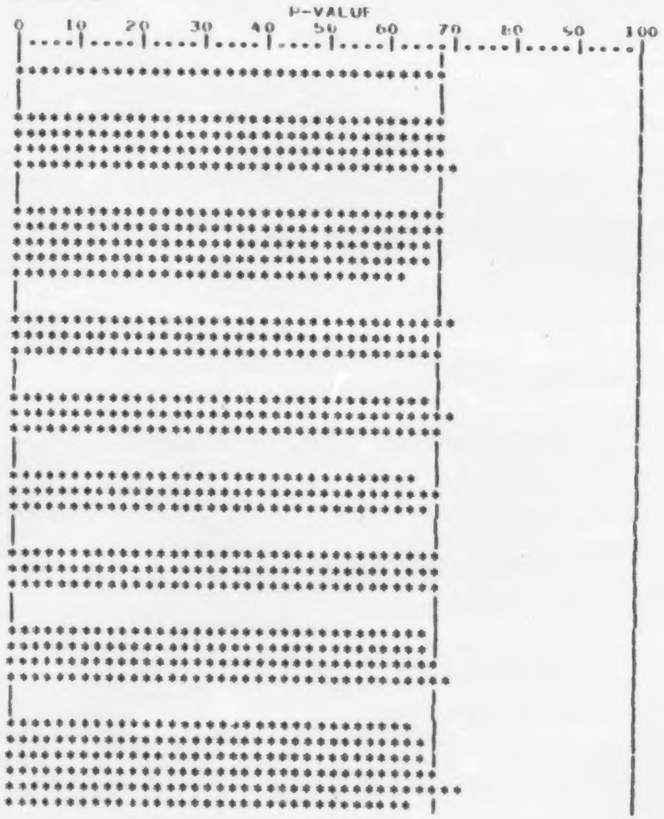
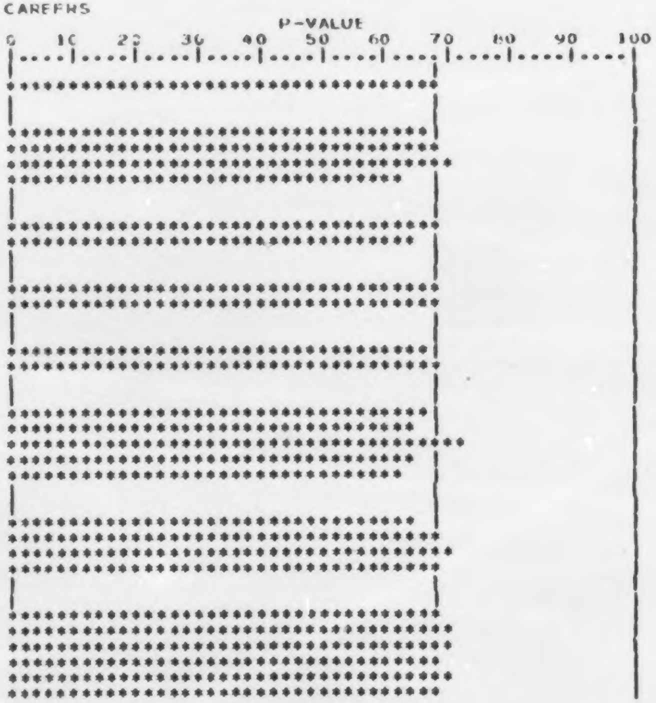


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT FOR 17 YEAR OLDS SPRING 1978

OBJECTIVE 1. KNOWLEDGE OF CHARACTERISTICS OF VARIOUS CAREERS

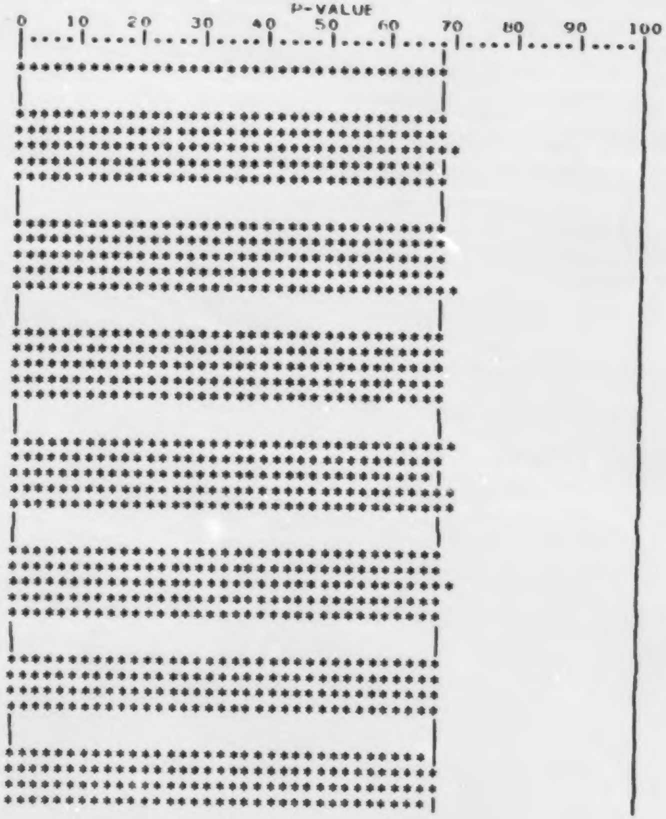
P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
68.23	0.41			2201	ALL STUDENTS
----HOW MANY TIMES DISCUSSED WITH COUNSELOR?----					
66.21	0.51	-2.02*	0.39	668	NONE
68.73	0.51	0.50	0.32	893	A FEW
70.43	0.58	2.20*	0.45	582	SEVERAL
62.80	2.09	-5.43*	2.04	49	DON'T KNOW
----HAVE YOU EVER DONE REGULAR WORK? ----					
68.50	0.38	0.27*	0.10	2080	YES
64.05	1.76	-4.18*	1.58	116	NO
----HAVE YOU EVER DONE VOLUNTEER WORK? ----					
68.46	0.58	0.23	0.39	651	YES
68.15	0.43	-0.08	0.17	1532	NO
----HAVE YOU EVER PARTICIPATED IN WORK STUDY----					
66.85	0.84	-1.38*	0.69	382	YES
68.58	0.41	0.35*	0.16	1793	NO
----WHICH BEST DESCRIBES YOUR PROGRAM? ----					
65.75	0.81	-2.49*	0.71	299	GENERAL
64.60	0.86	-3.63*	0.79	267	VOCATIONAL
71.40	0.35	3.16*	0.35	1161	COLLEGE
64.96	0.95	-3.27*	0.76	290	BUSINESS
62.25	1.21	-5.98*	1.13	172	DON'T KNOW
----KIND OF COMMUNITY ----					
64.80	1.33	-3.43*	1.14	381	BIG CITIES
67.34	1.06	-0.89	0.99	289	INDUSTRIAL
69.82	0.39	1.59*	0.43	943	RESIDENTIAL
68.12	0.66	-0.11	0.62	588	OTHER
----REGION OF THE STATE ----					
67.01	1.08	-1.22	0.80	563	BOSTON
70.04	0.57	1.81*	0.58	431	NORTHEAST
69.05	0.76	0.82	0.83	208	PITTSFIELD
67.66	0.77	-0.57	0.74	375	SOUTHEAST
69.48	1.17	1.25	1.13	211	SPRINGFIELD
67.62	0.61	-0.61	0.64	413	WORCESTER



NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17-YEAR OLDS SPRING 1978

OBJECTIVE 1. KNOWLEDGE OF CHARACTERISTICS OF VARIOUS CAREERS

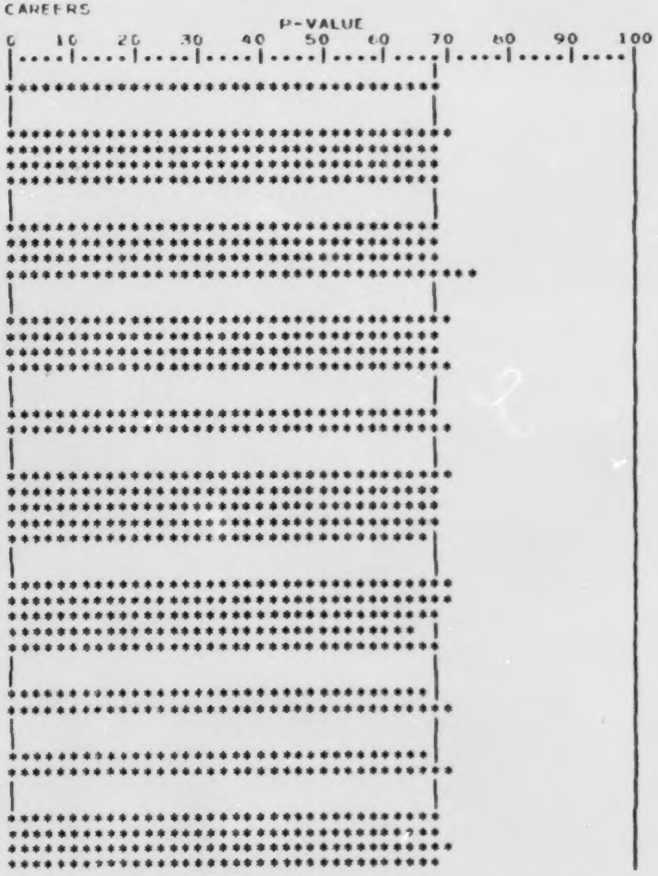
P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
68.23	0.41			2201	ALL STUDENTS
----EMPHASIS ON OBJECTIVE A. ----					
68.64	0.51	0.41	0.58	336	FIRST
68.40	1.11	0.17	0.97	416	SECOND
69.85	0.71	1.62*	0.73	314	THIRD
66.96	1.60	-1.27	1.43	298	FOURTH
68.01	0.64	-0.22	0.53	766	FIFTH
----EMPHASIS ON OBJECTIVE B. ----					
68.83	0.79	0.60	0.67	502	FIRST
68.65	0.74	0.42	0.73	388	SECOND
67.95	0.61	-0.28	0.63	426	THIRD
67.55	0.99	-0.68	0.77	621	FOURTH
70.19	1.53	1.96	1.52	101	FIFTH
----EMPHASIS ON OBJECTIVE C. ----					
68.59	1.04	0.36	1.03	188	FIRST
68.84	0.67	0.61	0.58	380	SECOND
68.43	0.86	0.20	0.62	776	THIRD
68.03	0.77	-0.20	0.68	541	FOURTH
67.42	1.27	-0.81	1.22	245	FIFTH
----EMPHASIS ON OBJECTIVE D. ----					
69.34	0.77	1.11	0.71	468	FIRST
67.16	0.91	-1.07	0.73	605	SECOND
65.91	1.12	-2.32*	1.05	294	THIRD
70.00	0.87	1.77*	0.82	365	FOURTH
69.16	0.66	0.93	0.69	398	FIFTH
----EMPHASIS ON OBJECTIVE E. ----					
67.08	0.68	-1.15	0.62	587	FIRST
68.87	1.06	0.64	0.86	515	SECOND
69.20	0.89	0.97	0.65	345	THIRD
67.50	0.89	-0.73	0.90	216	FOURTH
68.80	0.87	0.57	0.76	467	FIFTH
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE A. ----					
68.28	0.71	0.05	0.81	25	VERY SATISFIED
68.73	0.54	0.50	0.41	1088	SATISFIED
67.82	0.66	-0.41	0.49	917	DISSATISIFED
67.86	1.88	-0.37	1.63	100	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE B. ----					
66.08	0.96	-2.15*	0.97	132	VERY SATISFIED
68.98	0.56	0.75	0.45	993	SATISFIED
68.06	0.69	-0.17	0.49	946	DISSATISIFED
65.45	2.17	-2.78	2.14	59	VERY DISSATISFIE



NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17-YEAR OLDS SPRING 1978

OBJECTIVE 1. KNOWLEDGE OF CHARACTERISTICS OF VARIOUS CAREERS

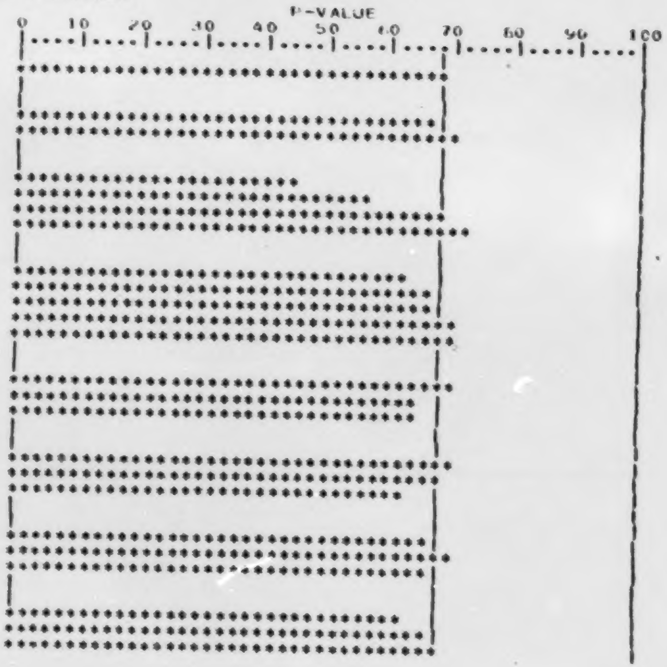
P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
68.23	0.41			2201	ALL STUDENTS
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE C. ----					
70.84	0.61	2.61*	0.73	25	VERY SATISFIED
68.52	0.42	0.27	0.41	1121	SATISFIED
68.04	0.81	-0.19	0.52	916	DISSATISIFED
67.71	1.59	-0.52	1.59	74	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE D. ----					
68.62	0.95	0.39	0.96	137	VERY SATISFIED
68.29	0.55	0.01	0.32	1322	SATISFIED
67.96	0.74	-0.27	0.64	629	DISSATISIFED
73.35	3.94	5.12*	0.98	42	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE E. ----					
70.73	0.55	2.50*	0.66	143	VERY SATISFIED
68.22	0.65	-0.01	0.36	1198	SATISFIED
67.67	0.67	-0.56	0.58	687	DISSATISIFED
70.69	1.66	2.45	1.63	81	VERY DISSATISFIE
----IS YOUR SCHOOL AN ESEA TITLE I SCHOOL? ----					
67.38	0.67	-0.85	0.50	885	YES
69.01	0.61	0.77	0.43	1077	NO
----PARENTAL SUPPORT OF YOUR SCHOOL? ----					
69.41	1.20	1.18	1.11	271	EXCELLENT
68.08	0.53	-0.15	0.39	1208	GOOD
68.20	1.04	-0.03	0.89	466	AVERAGE
68.90	1.89	0.56	1.03	128	FAIR
66.91	0.73	-1.32	0.82	62	POOR
----ATTITUDE OF STUDENTS TOWARD SCHOOL? ----					
69.34	1.24	1.11	1.19	192	EXCELLENT
69.14	0.42	0.91*	0.38	1224	GOOD
67.16	0.91	-1.07	0.76	550	AVERAGE
64.49	2.13	-3.74	2.02	139	FAIR
67.44	0.68	-0.79	0.78	25	POOR
----ATTENDANCE FIRST QUARTER ----					
66.65	0.91	-1.58*	0.69	629	LOW
69.05	0.48	0.81*	0.39	1207	HIGH
----ATTENDANCE SECOND QUARTER ----					
66.71	0.84	-1.52*	0.58	786	LOW
69.08	0.43	0.85*	0.41	1060	HIGH
----HOW AVAILABLE ARE CAREER ED PROGRAMS? ----					
68.32	0.51	0.10	0.29	1450	GENERALLY
67.71	0.56	-0.52	0.60	460	SOMEWHAT
70.19	2.59	1.96	2.46	170	MINIMALLY
67.72	2.64	-0.51	2.56	90	NOT AT ALL



NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT FOR 17 YEAR OLDS SPRING 1978

OBJECTIVE 2. KNOWLEDGE OF ABILITIES, TRAINING, AND PREPARATION

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
67.67	0.72			2201	ALL STUDENTS
----SEX OF THE STUDENT					----
66.24	0.90	-1.43*	0.38	1071	MALE
69.08	0.70	1.41*	0.40	1124	FEMALE
----GRADE OF THE STUDENT					----
43.19	3.25	-14.48*	3.15	34	9TH GRADE
55.21	1.55	-12.45*	1.28	168	10TH GRADE
68.43	0.66	0.76*	0.36	1421	11TH GRADE
71.17	0.68	3.51*	0.63	575	12TH GRADE
----HOW DO YOU FEEL ABOUT SCHOOL?					----
62.31	1.95	-5.36*	1.70	131	STRONGLY DISLIKE
65.59	1.20	-2.08*	1.01	222	DISLIKE
65.09	0.83	-2.58*	0.47	740	SCHOOL IS OK
70.65	0.72	2.99*	0.37	960	LIKE
69.32	2.11	1.65	1.85	124	STRONGLY LIKE
----HOMEWORK - DRILL WORK					----
70.73	0.54	3.06*	0.41	1078	DAILY
64.60	1.19	-3.07*	0.75	536	WEEKLY
64.97	1.04	-2.70*	0.69	576	MONTHLY
----HOMEWORK - READING ASSIGNED MATERIAL					----
70.28	0.64	2.62*	0.45	949	DAILY
67.52	0.86	-0.15	0.44	821	WEEKLY
62.44	1.10	-5.23*	0.73	420	MONTHLY
----HOMEWORK - WRITING ON ASSIGNED TOPICS					----
65.96	1.66	-1.71	1.50	113	DAILY
70.44	0.76	2.77*	0.48	745	WEEKLY
66.37	0.80	-1.29*	0.34	1331	MONTHLY
----HOMEWORK - WORK ON YOUR OWN					----
62.77	1.72	-4.89*	1.31	176	DAILY
65.36	1.24	-2.31*	0.75	396	WEEKLY
68.75	0.61	1.09*	0.28	1621	MONTHLY



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                    NATIONAL EVALUATION SYSTEMS. INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                  MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

                     OBJECTIVE 2. KNOWLEDGE OF ABILITIES. TRAINING. AND PREPARATION

             SE OF     GROUP     SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT    SIZE              REPORTING GROUP

 67.67      0.72                         2201              ALL STUDENTS

----TALKED WITH CAREER OR GUIDANCE COUNSELOR----
 69.24      0.65      1.57*     0.23     1345              YES
 65.70      0.94     -1.97*     0.50      826              NO

----TALKED WITH PARENT                           ----
 68.27      0.66      0.60*     0.13     1967              YES
 63.96      1.35     -3.70*     0.98      212              NO

----TLAKED WITH FRIEND                           ----
 68.51      0.65      0.84*     0.19     1870              YES
 64.13      1.27     -3.54*     0.86      301              NO

----TALKED WITH PERSON IN INTERESTING JOB        ----
 67.60      0.84     -0.07      0.34     1045              YES
 68.26      0.66      0.59      0.35     1112              NO

----TALKED WITH TEACHER                          ----
 69.51      0.82      1.84*     0.38      810              YES
 66.96      0.71     -0.71*     0.30     1350              NO

----DID YOU EVER TAKE A CAREER TEST?             ----
 69.70      0.60      2.11*     0.44     1122              YES
 66.24      0.91     -1.43*     0.43      811              NO
 63.83      1.51     -3.84*     1.11      260              I DON'T KNOW

----ARE FIELD TRIPS USEFUL?                      ----
 67.99      0.68      0.32      0.16     1887              YES
 66.87      1.26     -0.80      0.94      213              NO

----SCHOOLING HELPS YOU THINK ABOUT WORK?        ----
 66.23      1.04     -1.44      0.91      269              NOT VERY USEFUL
 67.10      0.73     -0.57      0.33     1062              SOMEWHAT USEFUL
 69.25      1.04      1.58*     0.54      691              VERY USEFUL
 67.07      1.43     -0.59      1.18      174              I DON'T KNOW
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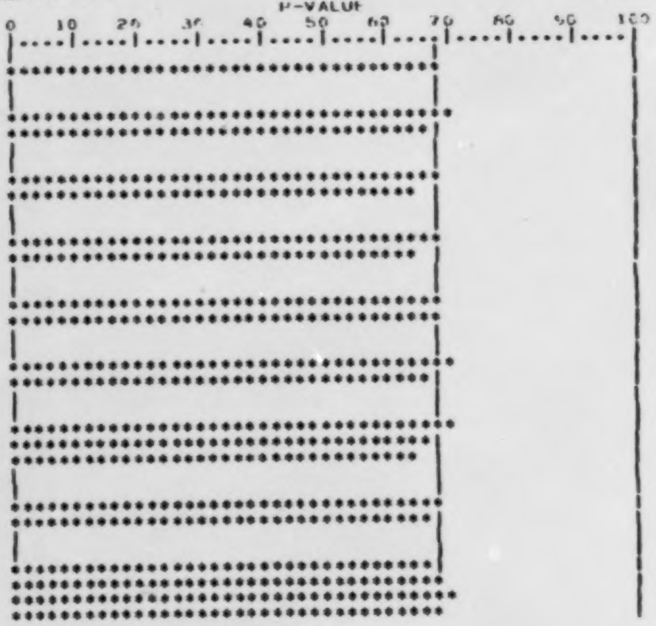
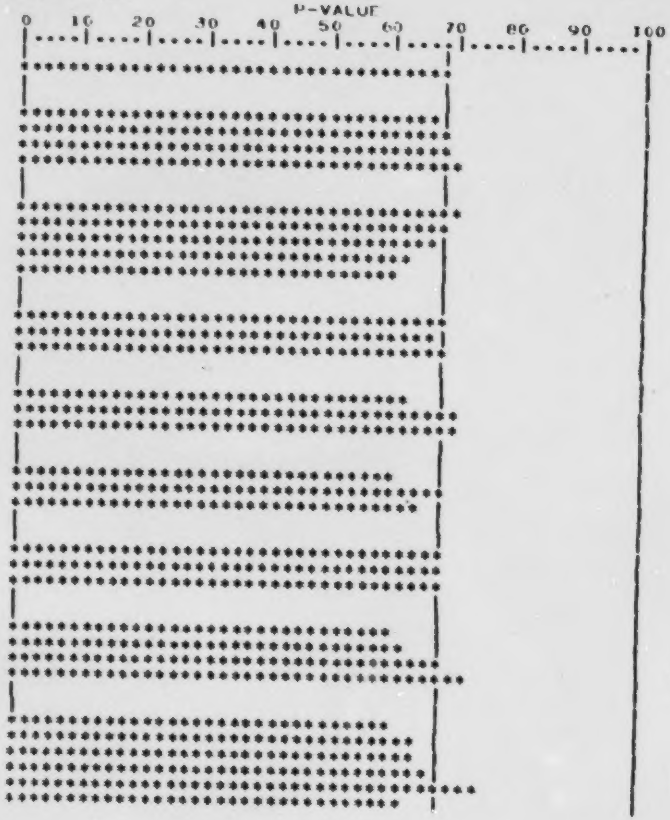


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS SPRING 1978

OBJECTIVE 2. KNOWLEDGE OF ABILITIES, TRAINING, AND PREPARATION

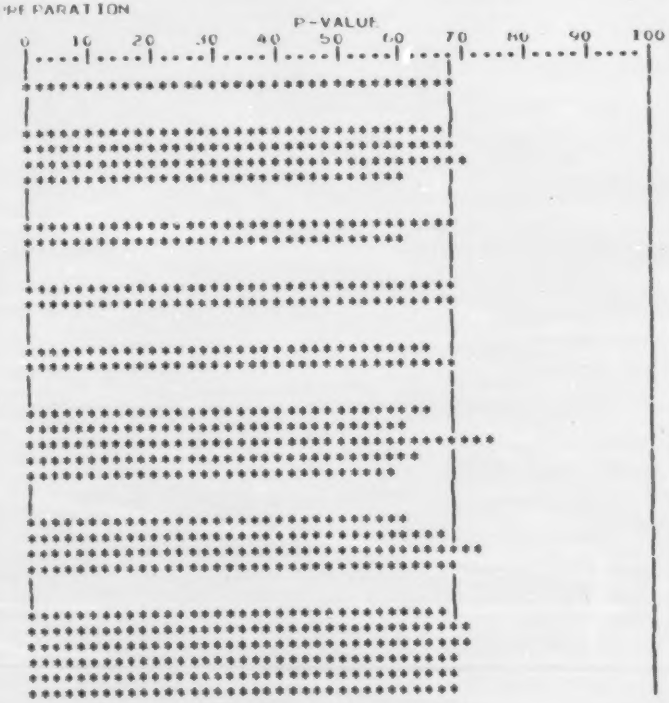
P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
67.67	0.72			2201	ALL STUDENTS
----HOW MUCH ARE YOUR PARENTS INVOLVED? ----					
66.14	0.98	-1.53*	0.66	406	HARDLY AT ALL
67.45	0.67	-0.22	0.46	728	ONLY A LITTLE
68.04	0.97	0.37	0.46	734	QUITE A BIT
69.06	1.13	1.39	0.72	329	A LOT
----FAMILY OCCUPATIONAL STATUS ----					
69.03	0.68	1.36*	0.27	1185	HIGH
67.79	0.70	0.12	0.47	641	MEDIUM
65.05	1.16	-2.61*	1.18	151	LOW
62.28	2.06	-5.39*	1.69	136	UNKNOWN
60.91	2.76	-6.76*	2.35	84	NONE
----DO YOU WANT A JOB LISTED IN QUESTION 18?----					
68.99	0.94	1.33*	0.39	1216	YES
65.15	0.73	-2.51*	0.56	623	NO
67.39	0.97	-0.29	0.82	357	I DON'T KNOW
----DO YOU WANT A JOB LISTED IN QUESTION 20?----					
62.32	0.93	-5.35*	0.52	706	YES
70.54	0.69	2.87*	0.35	1146	NO
69.12	0.88	1.45	0.74	343	I DON'T KNOW
----DO YOU WANT A JOB LISTED IN QUESTION 22?----					
59.71	1.47	-7.96*	1.15	160	YES
68.75	0.69	1.09*	0.15	1838	NO
63.62	1.25	-4.04*	1.02	199	I DON'T KNOW
----HOW SURE ARE YOU ABOUT FUTURE JOB? ----					
67.33	0.89	-0.33	0.59	472	NOT VERY SURE
67.86	0.78	0.19	0.34	948	SOMEWHAT SURE
67.59	0.91	-0.07	0.47	777	VERY SURE
----PARENTS WANT YOU TO GO TO COLLEGE? ----					
59.97	1.23	-7.70*	1.20	179	HARDLY AT ALL
61.23	0.96	-6.44*	0.71	335	ONLY A LITTLE
67.56	0.69	-0.10	0.38	764	QUITE A BIT
71.70	0.76	4.03*	0.39	908	A LOT
----WHAT DO YOU PLAN TO DO? ----					
60.52	1.08	-7.14*	0.73	315	FULL-TIME JOB
63.86	1.63	-3.81*	1.30	111	JOB-SCHOOL
64.65	1.12	-3.02*	0.89	257	SPECIAL TRAINING
66.80	0.94	-0.87	0.95	211	2-YEAR COLLEGE
74.03	0.52	6.36*	0.50	881	4-YEAR COLLEGE
62.66	0.94	-5.01*	0.67	398	DON'T KNOW



NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS SPRING 1978

OBJECTIVE 2. KNOWLEDGE OF ABILITIES, TRAINING, AND PREPARATION

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
67.67	0.72			2201	ALL STUDENTS
----HOW MANY TIMES DISCUSSED WITH COUNSELOR?----					
65.03	2.08	-2.64*	0.57	668	NONE
68.51	0.75	0.84	0.46	893	A FEW
70.28	0.85	2.61*	0.57	582	SEVERAL
60.46	1.94	-7.21*	1.81	49	DON'T KNOW
----HAVE YOU EVER DONE REGULAR WORK? ----					
68.11	0.65	0.44*	0.14	2080	YES
60.51	2.42	-7.16*	2.00	116	NO
----HAVE YOU EVER DONE VOLUNTEER WORK? ----					
68.39	0.67	0.72	0.49	651	YES
67.31	0.74	-0.36	0.21	1532	NO
----HAVE YOU EVER PARTICIPATED IN WORK STUDY----					
64.42	1.36	-3.25*	0.95	382	YES
68.38	0.66	0.71*	0.24	1793	NO
----WHICH BEST DESCRIBES YOUR PROGRAM? ----					
64.63	1.02	-3.04*	0.82	299	GENERAL
60.03	0.99	-7.64*	0.90	267	VOCATIONAL
73.12	0.46	5.45*	0.51	1161	COLLEGE
61.77	1.33	-5.89*	1.00	290	BUSINESS
58.03	1.48	-9.64*	1.16	172	DON'T KNOW
----KIND OF COMMUNITY ----					
60.08	2.34	-7.59*	1.97	381	BIG CITIES
65.49	1.77	-2.18	1.65	289	INDUSTRIAL
71.18	0.54	3.51*	0.74	943	RESIDENTIAL
67.57	0.84	-0.09	0.93	568	OTHER
----REGION OF THE STATE ----					
65.79	1.98	-1.88	1.46	563	BOSTON
69.91	1.23	2.24	1.16	431	NORTHEAST
69.10	1.41	1.43	1.52	208	PITTSFIELD
67.29	1.11	-0.38	1.14	375	SOUTHEAST
68.77	1.96	1.10	1.90	211	SPRINGFIELD
67.37	0.76	-0.30	0.91	413	WORCESTER



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                       NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                     MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17-YEAR OLDS SPRING 1978

                        OBJECTIVE 2. KNOWLEDGE OF ABILITIES, TRAINING, AND PREPARATION
                                                                                                  P-VALUE
          SE OF    GROUP   SE OF   SAMPLE                                    0   10   20   30   40   50   60   70   80   90  100
P-VALUE P-VALUE   EFFECT   EFFECT   SIZE           REPORTING GROUP           |....|....|....|....|....|....|....|....|....|....|
                                                                                                              |               |
 67.67     0.72                     2201           ALL STUDENTS              ***********************************               |
                                                                             |                                 |               |
----EMPHASIS ON OBJECTIVE A.                ----                             |                                 |               |
 68.12     1.32     0.45     1.40    336           FIRST                     ***********************************               |
 67.70     1.82     0.03     1.61    416           SECOND                    ***********************************               |
 70.39     1.01     2.72*    1.12    314           THIRD                     ************************************              |
 65.69     3.05    -1.98     2.71    298           FOURTH                    **********************************|               |
 67.41     1.03    -0.26     0.91    766           FIFTH                     ***********************************               |
                                                                             |                                 |               |
----EMPHASIS ON OBJECTIVE B.                ----                             |                                 |               |
 68.09     1.37     0.42     1.17    592           FIRST                     ***********************************               |
 67.93     1.45     0.16     1.38    388           SECOND                    ***********************************               |
 67.97     0.60     0.30     0.96    428           THIRD                     ***********************************               |
 66.52     1.75    -1.15     1.35    621           FOURTH                    **********************************|               |
 72.89     1.59     5.22*    1.67    101           FIFTH                     *************************************             |
                                                                             |                                 |               |
----EMPHASIS ON OBJECTIVE C.                ----                             |                                 |               |
 66.42     2.32    -1.25     2.23    188           FIRST                     **********************************|               |
 69.02     0.94     1.35     1.04    380           SECOND                    ************************************              |
 67.21     1.44    -0.46     1.06    776           THIRD                     ***********************************               |
 68.53     1.32     0.86     1.17    541           FOURTH                    ***********************************               |
 66.34     2.28    -0.83     2.17    245           FIFTH                     **********************************|               |
                                                                             |                                 |               |
----EMPHASIS ON OBJECTIVE D.                ----                             |                                 |               |
 69.02     1.23     1.35     1.17    468           FIRST                     ************************************              |
 66.23     1.67    -1.44     1.31    605           SECOND                    **********************************|               |
 64.65     2.23    -3.02     2.04    294           THIRD                     ********************************* |               |
 69.23     1.42     1.57     1.36    365           FOURTH                    ************************************              |
 69.74     1.14     2.07     1.17    398           FIFTH                     ************************************              |
                                                                             |                                 |               |
----EMPHASIS ON OBJECTIVE E.                ----                             |                                 |               |
 66.29     1.17    -1.37     1.07    587           FIRST                     **********************************|               |
 68.14     1.86     0.48     1.51    515           SECOND                    ***********************************               |
 70.26     1.70     2.60     1.58    245           THIRD                     ************************************              |
 65.78     1.54    -1.88     1.57    216           FOURTH                    **********************************|               |
 68.13     1.33     0.46     1.23    467           FIFTH                     ***********************************               |
                                                                             |                                 |               |
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE A. ----                             |                                 |               |
 65.84     0.81    -1.83     1.07     25           VERY SATISFIED            **********************************|               |
 68.41     0.90     0.75     0.72   1068           SATISFIED                 ***********************************               |
 67.19     1.24    -0.48     0.88    917           DISSATISIFED              ***********************************               |
 66.07     3.17    -1.60     3.09    100           VERY DISSATISFIE          **********************************|               |
                                                                             |                                 |               |
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE B. ----                             |                                 |               |
 64.37     1.66    -3.29     1.72    132           VERY SATISFIED            ********************************* |               |
 68.92     0.92     1.25     0.77    993           SATISFIED                 ***********************************               |
 67.46     1.23    -0.27     0.85    646           DISSATISIFED              ***********************************               |
 61.82     3.60    -5.85     3.56     59           VERY DISSATISFIE          ********************************  |               |
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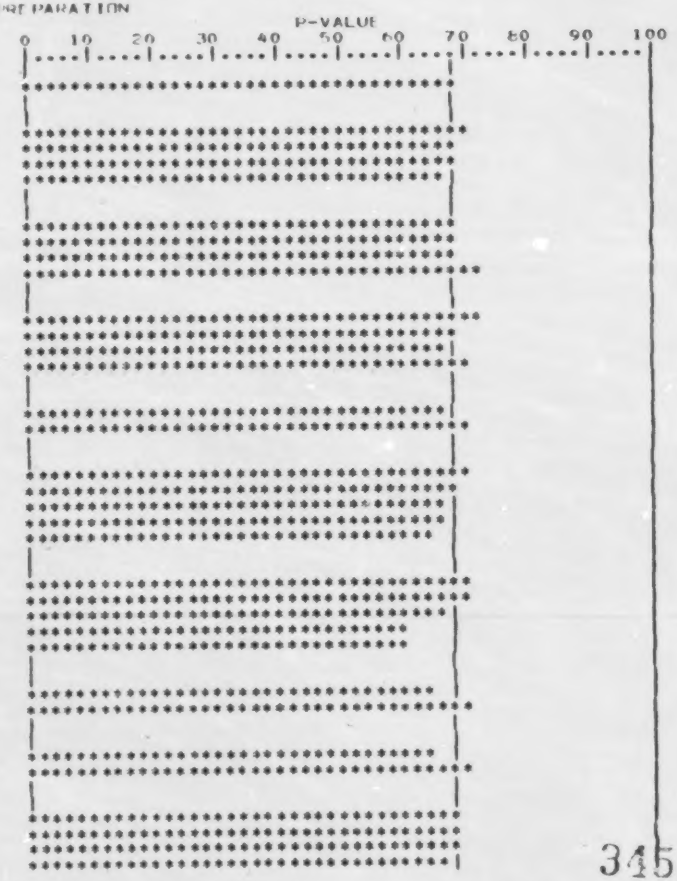
NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17-YEAR OLDS SPRING 1978

OBJECTIVE 2. KNOWLEDGE OF ABILITIES, TRAINING, AND PREPARATION

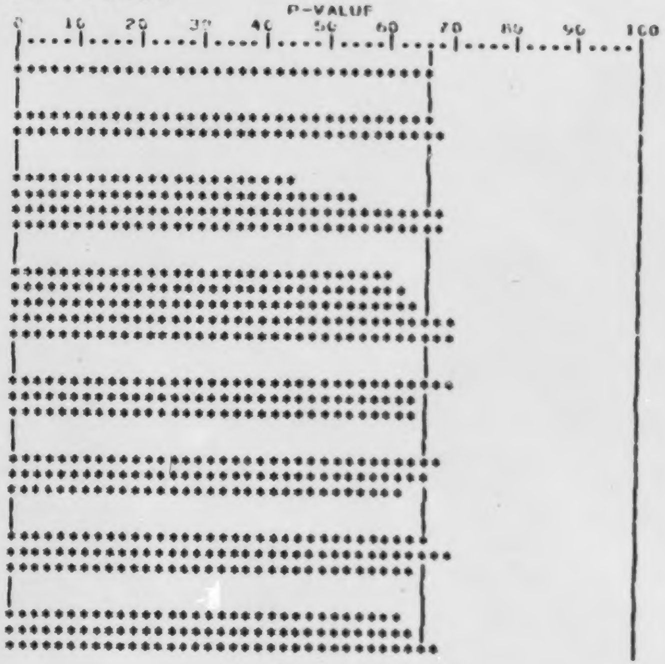
P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
67.67	0.72			2201	ALL STUDENTS
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE C. ----					
70.32	0.64	2.65*	0.95	25	VERY SATISFIED
68.44	0.68	0.78	0.71	1121	SATISFIED
67.09	1.43	-0.57	0.92	910	DISSATISIFED
65.20	2.28	-2.47	3.32	74	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE D. ----					
67.90	2.15	0.24	2.10	137	VERY SATISFIED
67.76	0.94	0.09	0.56	1222	SATISFIED
67.41	1.37	-0.26	1.15	629	DISSATISIFED
72.08	1.12	4.41*	1.29	42	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE E. ----					
72.95	1.04	5.28*	1.19	143	VERY SATISFIED
67.50	1.02	-0.16	0.64	1196	SATISFIED
66.96	1.26	-0.70	1.06	687	DISSATISIFED
69.64	1.49	1.97	1.57	81	VERY DISSATISFIE
----IS YOUR SCHOOL AN ESEA TITLE I SCHOOL? ----					
66.08	1.12	-1.58	0.66	885	YES
69.04	1.04	1.37	0.75	1077	NO
----PARENTAL SUPPORT OF YOUR SCHOOL? ----					
70.21	1.65	2.54	1.58	271	EXCELLENT
68.15	0.99	0.48	0.68	1208	GOOD
66.19	1.67	-1.47	1.47	460	AVERAGE
66.87	2.81	-0.80	2.73	128	FAIR
63.03	2.21	-4.64*	2.25	63	POOR
----ATTITUDE OF STUDENTS TOWARD SCHOOL? ----					
70.54	2.03	2.87	1.97	192	EXCELLENT
69.58	0.60	1.91*	0.68	1224	GOOD
65.31	1.75	-2.36	1.41	550	AVERAGE
60.07	3.20	-7.60*	3.05	139	FAIR
59.44	0.50	-8.23*	0.87	25	POOR
----ATTENDANCE FIRST QUARTER ----					
64.39	1.71	-3.27*	1.26	629	LOW
69.21	0.69	1.54*	0.70	1207	HIGH
----ATTENDANCE SECOND QUARTER ----					
64.67	1.48	-3.00*	1.03	788	LOW
69.56	0.66	1.90*	0.72	1060	HIGH
----HOW AVAILABLE ARE CAREER ED PROGRAMS? ----					
67.97	0.91	0.30	0.51	1450	GENERALLY
67.09	1.07	-0.59	1.10	460	SOMEWHAT
66.70	3.88	1.03	3.69	140	MINIMALLY
66.32	4.48	-1.35	4.34	60	NOT AT ALL



NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS SPRING 1978

OBJECTIVE 3. KNOWLEDGE AND ABILITY NECESSARY TO PLAN AND IMPLEMENT

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE		REPORTING GROUP
66.30	0.79			2201		ALL STUDENTS
----SEX OF THE STUDENT					----	
65.01	1.01	-1.30*	0.39	1071		MALE
67.58	0.72	1.28*	0.43	1124		FEMALE
----GRADE OF THE STUDENT					----	
44.75	2.80	-21.55*	2.73	34		9TH GRADE
53.32	1.93	-12.98*	1.45	168		10TH GRADE
67.65	0.63	1.35*	0.34	1421		11TH GRADE
68.34	0.71	2.04*	0.66	575		12TH GRADE
----HOW DO YOU FEEL ABOUT SCHOOL?					----	
60.91	1.49	-5.39*	1.33	131		STRONGLY DISLIKE
62.60	1.21	-3.70*	1.02	222		DISLIKE
64.35	0.92	-1.96*	0.46	740		SCHOOL IS OK
69.04	0.81	2.74*	0.33	980		LIKE
69.03	2.08	2.72	1.82	124		STRONGLY LIKE
----HOMEWORK - DRILL WORK					----	
69.28	0.54	2.97*	0.41	1078		DAILY
63.21	1.30	-3.09*	0.71	536		WEEKLY
63.80	1.05	-2.50*	0.64	576		MONTHLY
----HOMEWORK - READING ASSIGNED MATERIAL					----	
68.85	0.66	2.55*	0.42	949		DAILY
65.99	0.93	-0.31	0.37	821		WEEKLY
61.50	1.09	-4.80*	0.68	420		MONTHLY
----HOMEWORK - WRITING ON ASSIGNED TOPICS					----	
65.70	1.41	-0.61	1.34	113		DAILY
69.27	0.73	2.97*	0.48	745		WEEKLY
64.77	0.92	-1.54*	0.33	1331		MONTHLY
----HOMEWORK - WORK ON YOUR OWN					----	
61.41	1.93	-4.89*	1.41	176		DAILY
64.69	1.27	-1.61*	0.69	396		WEEKLY
67.24	0.64	0.93*	0.27	1621		MONTHLY



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              NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
             MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

               OBJECTIVE 3. KNOWLEDGE AND ABILITY NECESSARY TO PLAN AND IMPLEMENT

           SE OF     GROUP     SE OF   SAMPLE
P-VALUE  P-VALUE    EFFECT    EFFECT    SIZE           REPORTING GROUP

 66.30     0.79                         2201           ALL STUDENTS

----TALKED WITH CAREER OR GUIDANCE COUNSELOR----
 68.18     0.64      1.88*     0.34     1345           YES
 63.85     1.06     -2.46*     0.52      828           NO

----TALKED WITH PARENT                        ----
 66.92     0.72      0.61*     0.13     1967           YES
 62.31     1.46     -3.99*     1.03      212           NO

----TLAKED WITH FRIEND                        ----
 67.14     0.72      0.84*     0.18     1870           YES
 62.70     1.29     -3.61*     0.76      301           NO

----TALKED WITH PERSON IN INTERESTING JOB     ----
 66.72     1.00      0.41      0.38     1045           YES
 66.34     0.65      0.03      0.37     1112           NO

----TALKED WITH TEACHER                       ----
 68.52     0.86      2.22*     0.37      810           YES
 65.32     0.79     -0.99*     0.28     1350           NO

----DID YOU EVER TAKE A CAREER TEST?          ----
 68.74     0.63      2.43*     0.46     1123           YES
 64.44     1.05     -1.86*     0.50      611           NO
 62.46     1.35     -3.85*     0.94      260           I DON'T KNOW

----ARE FIELD TRIPS USEFUL?                   ----
 66.93     0.71      0.63*     0.19     1887           YES
 64.69     1.30     -1.61      0.92      213           NO

----SCHOOLING HELPS YOU THINK ABOUT WORK?     ----
 63.30     0.87     -3.00*     0.74      269           NOT VERY USEFUL
 66.12     0.80     -0.18      0.30     1062           SOMEWHAT USEFUL
 67.89     1.12      1.59*     0.52      691           VERY USEFUL
 66.11     1.32     -0.20      1.16      174           I DON'T KNOW
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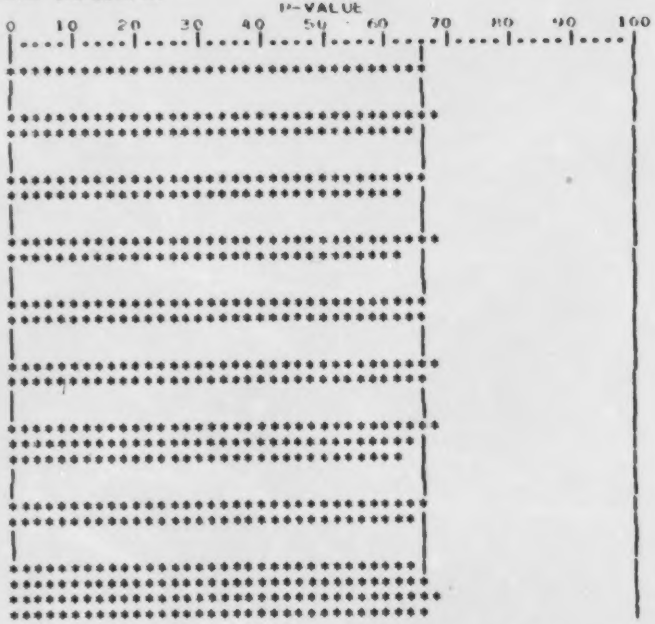

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            NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
          MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

             OBJECTIVE 3. KNOWLEDGE AND ABILITY NECESSARY TO PLAN AND IMPLEMENT

             SE OF     GROUP     SE OF   SAMPLE
P-VALUE    P-VALUE    EFFECT    EFFECT    SIZE               REPORTING GROUP

 66.30       0.79                         2201               ALL STUDENTS

----HOW MUCH ARE YOUR PARENTS INVOLVED?          ----
 63.99       0.92     -2.32*     0.57     406                HARDLY AT ALL
 66.56       0.69      0.26      0.50     728                ONLY A LITTLE
 66.74       1.12      0.44      0.51     734                QUITE A BIT
 67.47       1.15      1.17      0.71     329                A LOT

----FAMILY OCCUPATIONAL STATUS                   ----
 67.56       0.73      1.25*     0.29    1185                HIGH
 66.88       0.72      0.58      0.49     641                MEDIUM
 62.63       1.40     -3.67*     1.11     151                LOW
 60.05       2.03     -6.26*     1.62     138                UNKNOWN
 61.02       2.56     -5.28*     2.13      84                NONE

----DO YOU WANT A JOB LISTED IN QUESTION 18?----
 67.44       1.00      1.13*     0.38    1218                YES
 64.39       0.88     -1.91*     0.60     623                NO
 65.63       0.60     -0.67      0.73     357                I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 20?----
 62.21       1.19     -4.09*     0.60     706                YES
 68.54       0.70      2.23*     0.36    1146                NO
 67.31       0.78      1.00      0.78     343                I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 22?----
 58.80       1.83     -7.50*     1.39     160                YES
 67.19       0.74      0.89*     0.17    1838                NO
 63.74       1.28     -2.57*     1.02     199                I DON'T KNOW

----HOW SURE ARE YOU ABOUT FUTURE JOB?           ----
 65.34       1.01     -0.96      0.57     472                NOT VERY SURE
 66.69       0.78      0.39      0.32     948                SOMEWHAT SURE
 66.37       0.96      0.06      0.43     777                VERY SURE

----PARENTS WANT YOU TO GO TO COLLEGE?           ----
 58.62       1.15     -7.68*     1.18     179                HARDLY AT ALL
 61.38       1.07     -4.93*     0.74     335                ONLY A LITTLE
 66.45       0.82      0.14      0.45     764                QUITE A BIT
 69.58       0.89      3.28*     0.47     908                A LOT

----WHAT DO YOU PLAN TO DO?                      ----
 60.16       1.14     -6.13*     0.80     315                FULL-TIME JOB
 61.89       1.56     -4.42*     1.24     111                JOB-SCHOOL
 63.20       1.54     -3.10*     1.02     257                SPECIAL TRAINING
 67.32       0.85      1.02      0.95     211                2-YEAR COLLEGE
 71.79       0.52      5.48*     0.52     881                4-YEAR COLLEGE
 61.64       1.10     -4.67*     0.68     396                DON'T KNOW
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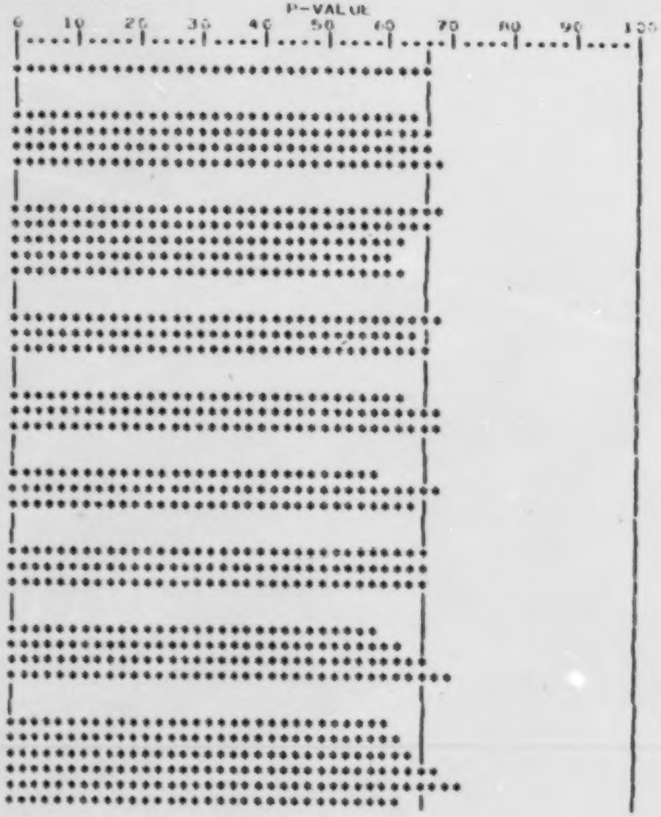
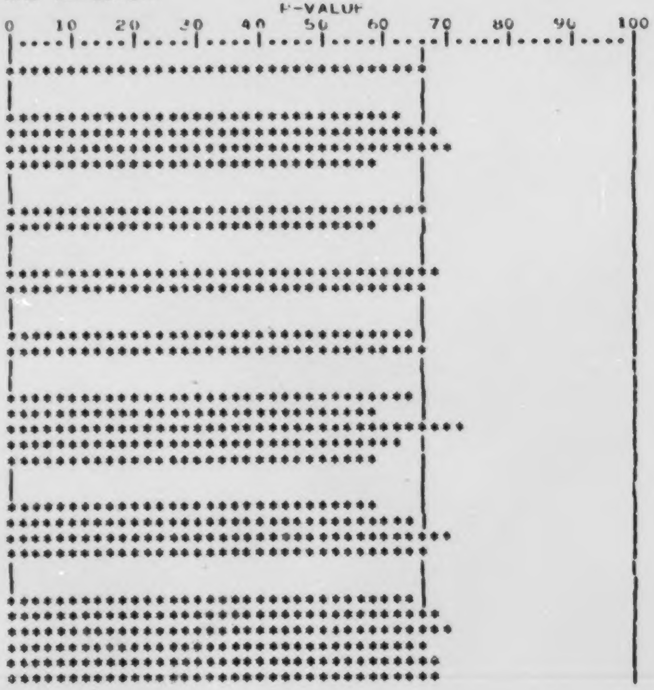


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS SPRING 1978

OBJECTIVE 3. KNOWLEDGE AND ABILITY NECESSARY TO PLAN AND IMPLEMENT

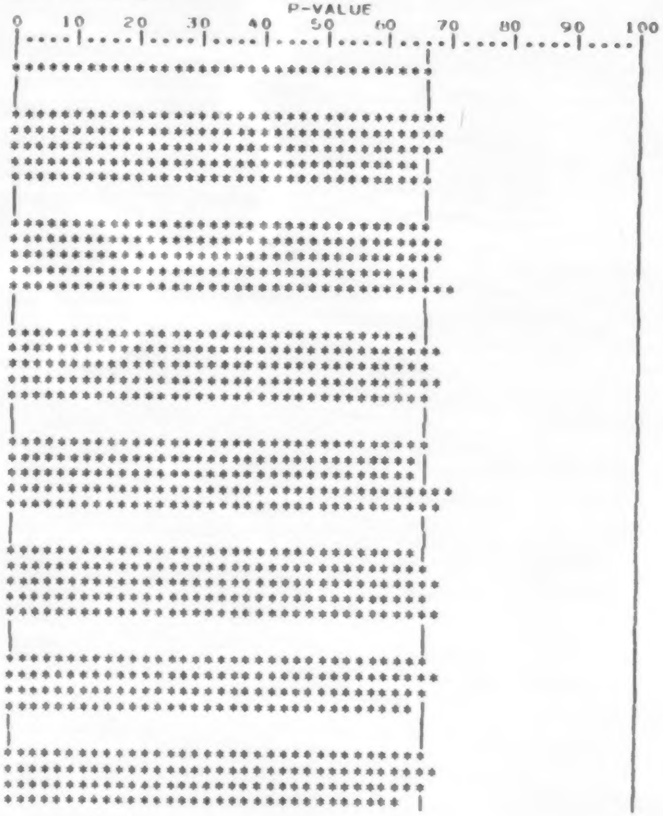
P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
66.33	0.79			2201	ALL STUDENTS
----HOW MANY TIMES DISCUSSED WITH COUNSELOR?----					
62.78	1.09	-3.53*	0.58	668	NONE
67.71	0.74	1.41*	0.47	893	A FEW
69.09	0.90	2.78*	0.61	582	SEVERAL
58.12	2.28	-8.19*	2.15	49	DON'T KNOW
----HAVE YOU EVER DONE REGULAR WORK? ----					
66.81	0.69	0.50*	0.16	2080	YES
58.58	2.78	-7.72*	2.23	116	NO
----HAVE YOU EVER DONE VOLUNTEER WORK? ----					
67.51	1.02	1.21*	0.48	651	YES
65.79	0.76	-0.51*	0.21	1532	NO
----HAVE YOU EVER PARTICIPATED IN WORK STUDY----					
63.40	1.41	-2.91*	0.90	382	YES
66.98	0.71	0.67*	0.23	1793	NO
----WHICH BEST DESCRIBES YOUR PROGRAM? ----					
62.73	0.98	-2.57*	0.85	299	GENERAL
58.28	1.51	-8.02*	1.26	267	VOCATIONAL
71.10	0.48	4.80*	0.56	1161	COLLEGE
62.70	1.53	-3.60*	1.06	290	BUSINESS
57.26	1.50	-9.05*	1.21	172	DON'T KNOW
----KIND OF COMMUNITY ----					
57.68	2.62	-8.42*	2.21	381	BIG CITIES
63.16	2.03	-3.15	1.89	289	INDUSTRIAL
70.07	0.44	3.77*	0.78	943	RESIDENTIAL
66.87	0.84	0.56	0.98	588	OTHER
----REGION OF THE STATE ----					
63.93	2.27	-2.37	1.64	563	BOSTON
67.10	1.16	0.80	1.17	431	NORTHEAST
69.07	0.83	2.77*	1.11	208	PITTSFIELD
66.43	1.14	0.17	1.20	375	SOUTHEAST
67.03	1.83	0.70	1.82	211	SPRINGFIELD
68.05	0.70	1.75	0.97	413	WORCESTER



NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17-YEAR OLDS SPRING 1978

OBJECTIVE 3. KNOWLEDGE AND ABILITY NECESSARY TO PLAN AND IMPLEMENT

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
66.30	0.79			2201	ALL STUDENTS
----EMPHASIS ON OBJECTIVE A. ----					
67.33	1.26	1.03	1.30	336	FIRST
67.80	1.64	1.49	1.50	416	SECOND
66.12	1.13	1.82	1.25	314	THIRD
63.75	3.76	-2.55	3.32	298	FOURTH
65.46	1.13	-0.84	0.99	766	FIFTH
----EMPHASIS ON OBJECTIVE B. ----					
66.86	1.29	0.56	1.14	592	FIRST
67.50	1.25	1.19	1.29	388	SECOND
67.13	0.90	0.83	1.05	428	THIRD
64.06	2.06	-2.25	1.54	621	FOURTH
70.44	0.93	4.14*	1.18	101	FIFTH
----EMPHASIS ON OBJECTIVE C. ----					
64.54	2.19	-1.76	2.14	188	FIRST
67.72	0.86	1.41	1.04	380	SECOND
65.75	1.75	-0.55	1.23	776	THIRD
67.20	1.20	0.90	1.14	541	FOURTH
65.64	2.20	-0.67	2.11	245	FIFTH
----EMPHASIS ON OBJECTIVE D. ----					
66.99	1.20	0.69	1.19	468	FIRST
64.51	2.08	-2.29	1.58	605	SECOND
64.69	2.02	-1.61	1.90	294	THIRD
69.04	1.28	2.73*	1.29	365	FOURTH
68.11	0.92	1.81	1.07	298	FIFTH
----EMPHASIS ON OBJECTIVE E. ----					
64.87	1.42	-1.44	1.25	587	FIRST
65.61	2.15	-0.70	1.70	515	SECOND
67.96	1.55	1.66	1.50	345	THIRD
65.01	1.55	-1.29	1.60	216	FOURTH
68.46	1.16	2.15	1.16	467	FIFTH
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE A. ----					
65.72	0.70	-0.58	1.05	25	VERY SATISFIED
67.12	0.91	0.62	0.76	1088	SATISFIED
65.69	1.45	-0.62	0.98	917	DISSATISIFED
64.11	2.72	-2.19	2.70	100	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE B. ----					
65.13	1.69	-1.17	1.76	132	VERY SATISFIED
67.54	1.00	1.23	0.84	993	SATISFIED
65.59	1.38	-0.71	0.93	946	DISSATISIFED
61.34	3.97	-4.96	3.93	59	VERY DISSATISFIE



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                 NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
               MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17-YEAR OLDS SPRING 1978

                   OBJECTIVE 3. KNOWLEDGE AND ABILITY NECESSARY TO PLAN AND IMPLEMENT

           SE OF      GROUP      SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT     EFFECT    SIZE                REPORTING GROUP

 66.30     0.79                           2201                ALL STUDENTS

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE C. ----
 72.00     0.39      5.70*      0.87        25                VERY SATISFIED
 66.99     0.73      0.68       0.78      1121                SATISFIED
 65.67     1.57     -0.63       1.00       910                DISSATISIFED
 63.72     3.52     -2.59       3.48        78                VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE D. ----
 66.19     2.04     -0.11       2.06       137                VERY SATISFIED
 66.14     1.09     -0.16       0.61      1322                SATISFIED
 66.28     1.28     -0.02       1.15       629                DISSATISIFED
 73.56     2.75      7.26*      2.76        42                VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE E. ----
 70.50     0.88      4.19*      1.11       143                VERY SATISFIED
 65.72     1.18     -0.58       0.66      1198                SATISFIED
 66.24     1.17     -0.07       1.07       687                DISSATISIFED
 70.00     2.53      3.69       2.52        81                VERY DISSATISFIE

----IS YOUR SCHOOL AN ESEA TITLE I SCHOOL?  ----
 64.98     1.17     -1.33       0.93       885                YES
 67.27     1.22      0.97       0.82      1077                NO

----PARENTAL SUPPORT OF YOUR SCHOOL?        ----
 68.72     1.36      2.41       1.40       271                EXCELLENT
 66.61     1.11      0.30       0.74      1208                GOOD
 66.05     1.70     -0.26       1.52       460                AVERAGE
 63.44     4.01     -2.86       3.84       126                FAIR
 59.60     1.74     -6.71*      1.82        62                POOR

----ATTITUDE OF STUDENTS TOWARD SCHOOL?     ----
 68.32     1.76      2.02       1.77       192                EXCELLENT
 68.23     0.59      1.93*      0.74      1224                GOOD
 64.47     2.15     -1.83       1.70       550                AVERAGE
 57.55     3.29     -8.76*      3.14       139                FAIR
 56.16     0.85    -10.14*      1.15        25                POOR

----ATTENDANCE FIRST QUARTER                ----
 62.29     1.80     -4.01*      1.35       629                LOW
 67.98     0.78      1.67*      0.76      1207                HIGH

----ATTENDANCE SECOND QUARTER               ----
 62.80     1.67     -3.51*      1.14       788                LOW
 66.38     0.63      2.07*      0.77      1060                HIGH

----HOW AVAILABLE ARE CAREER ED PROGRAMS?   ----
 66.27     1.05     -0.03       0.51      1450                GENERALLY
 66.98     1.09      0.68       1.15       460                SOMEWHAT
 67.85     2.94      1.55       2.66       130                MINIMALLY
 62.49     3.71     -3.82       3.64        90                NOT AT ALL
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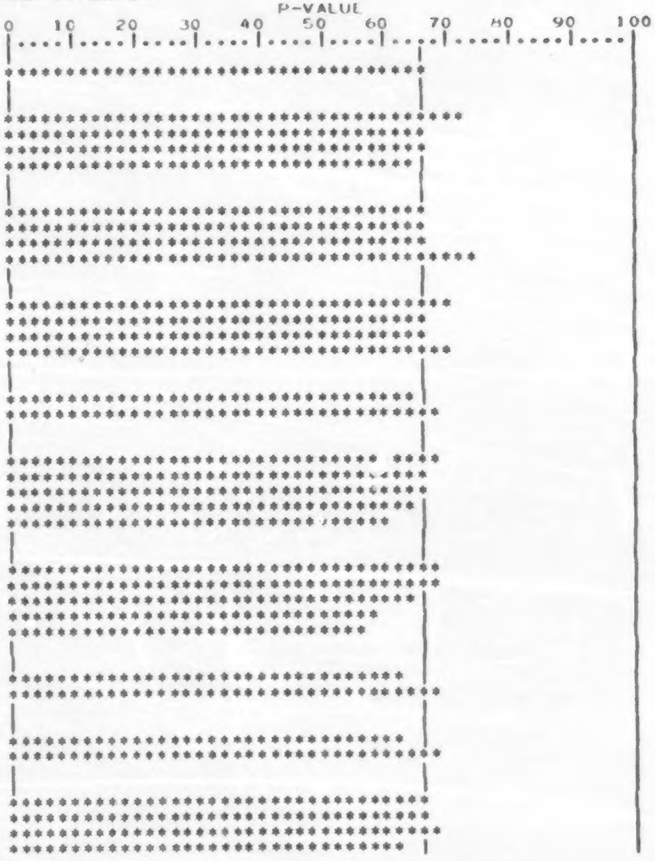

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                NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
              MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

                 OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

            SE OF     GROUP      SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT     EFFECT    SIZE                REPORTING GROUP

 83.15      0.82                          2201                ALL STUDENTS

----SEX OF THE STUDENT                               ----
 82.01      1.34     -1.14*      0.41     1071                MALE
 84.31      0.78      1.16*      0.44     1124                FEMALE

----GRADE OF THE STUDENT                             ----
 52.81      4.63    -30.34*      4.51       34                9TH GRADE
 68.83      2.42    -14.32*      1.88      168                10TH GRADE
 84.66      0.54      1.52*      0.40     1421                11TH GRADE
 85.77      0.67      2.62*      0.61      575                12TH GRADE

----HOW DO YOU FEEL ABOUT SCHOOL?                    ----
 76.76      1.93     -6.39*      1.60      131                STRONGLY DISLIKE
 80.19      1.39     -2.96*      1.00      222                DISLIKE
 81.71      0.93     -1.44*      0.45      740                SCHOOL IS OK
 85.68      0.75      2.53*      0.37      980                LIKE
 84.19      2.17      1.05       1.88      124                STRONGLY LIKE

----HOMEWORK - DRILL WORK                            ----
 86.27      0.50      3.12*      0.45     1076                DAILY
 80.03      1.54     -3.11*      0.91      536                WEEKLY
 80.31      1.12     -2.83*      0.71      576                MONTHLY

----HOMEWORK - READING ASSIGNED MATERIAL             ----
 85.32      0.66      2.17*      0.48      949                DAILY
 82.94      1.01     -0.20       0.43      821                WEEKLY
 78.83      1.33     -4.32*      0.85      420                MONTHLY

----HOMEWORK - WRITING ON ASSIGNED TOPICS            ----
 82.87      1.71     -0.27       1.48      113                DAILY
 84.86      0.73      1.72*      0.50      745                WEEKLY
 82.28      0.98     -0.86*      0.36     1331                MONTHLY

----HOMEWORK - WORK ON YOUR OWN                      ----
 78.65      1.85     -4.50*      1.36      176                DAILY
 80.64      1.62     -2.51*      0.97      396                WEEKLY
 84.24      0.63      1.09*      0.33     1621                MONTHLY
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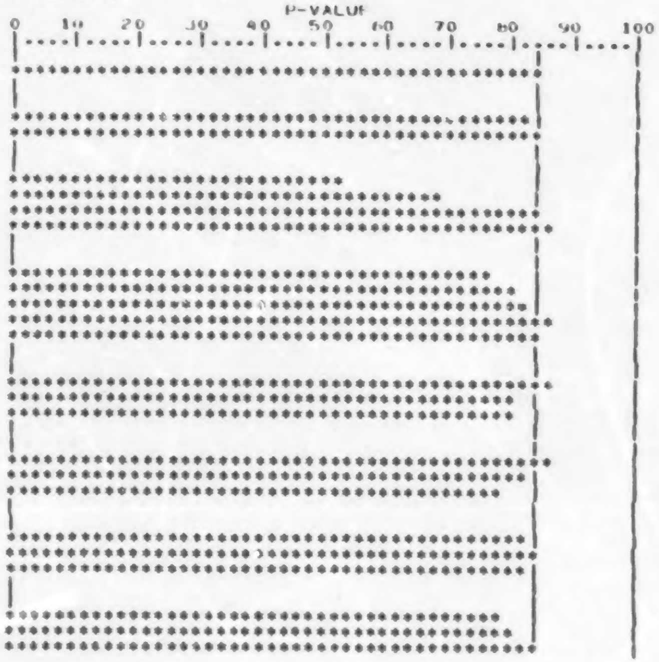

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                    NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                  MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

                       OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

           SE OF     GROUP      SE OF    SAMPLE
P-VALUE   P-VALUE    EFFECT     EFFECT    SIZE              REPORTING GROUP

 83.15      0.12                          2201              ALL STUDENTS

----TALKED WITH CAREER OR GUIDANCE COUNSELOR----
 84.78      0.66      1.63*      0.34     1345              YES
 81.37      1.04     -1.78*      0.51      826              NO

----TALKED WITH PARENT                          ----
 83.79      0.74      0.64*      0.15     1967              YES
 79.97      1.37     -3.18*      0.95      212              NO

----TLAKED WITH FRIEND                          ----
 83.94      0.72      0.79*      0.24     1870              YES
 80.73      1.40     -2.42*      0.84      301              NO

----TALKED WITH PERSON IN INTERESTING JOB       ----
 83.24      0.96      0.09       0.37     1045              YES
 83.82      0.68      0.68       0.41     1112              NO

----TALKED WITH TEACHER                         ----
 84.72      0.86      1.57*      0.33      810              YES
 82.80      0.77     -0.34       0.32     1350              NO

----DID YOU EVER TAKE A CAREER TEST?            ----
 85.25      0.61      2.10*      0.49     1123              YES
 81.78      1.08     -1.36*      0.46      811              NO
 79.25      1.63     -3.90*      1.14      260              I DON'T KNOW

----ARE FIELD TRIPS USEFUL?                     ----
 83.58      0.76      0.44*      0.18     1887              YES
 81.25      1.36     -1.90*      0.97      213              NO

----SCHOOLING HELPS YOU THINK ABOUT WORK?       ----
 80.85      1.03     -2.30*      0.77      269              NOT VERY USEFUL
 83.38      0.82      0.23       0.35     106[illegible]    SOMEWHAT USEFUL
 84.09      1.08      0.94*      0.46      6[illegible]     VERY USEFUL
 81.85      1.50     -1.30       1.23      [illegible]4     I DON'T KNOW
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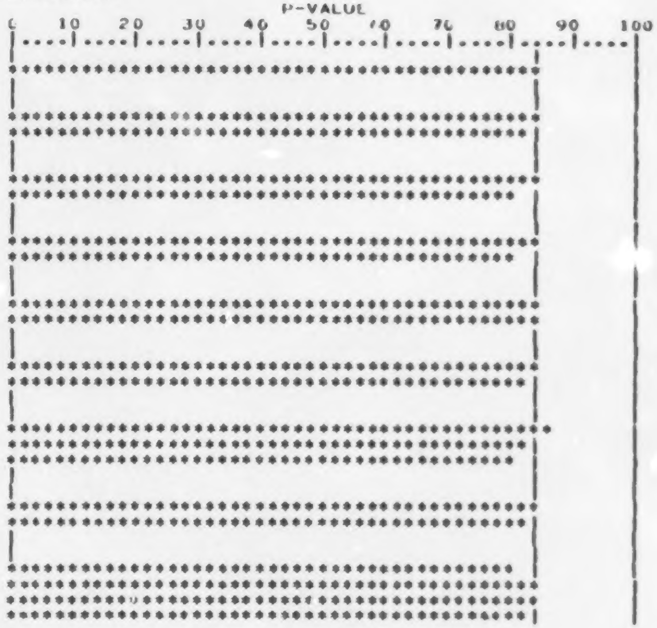
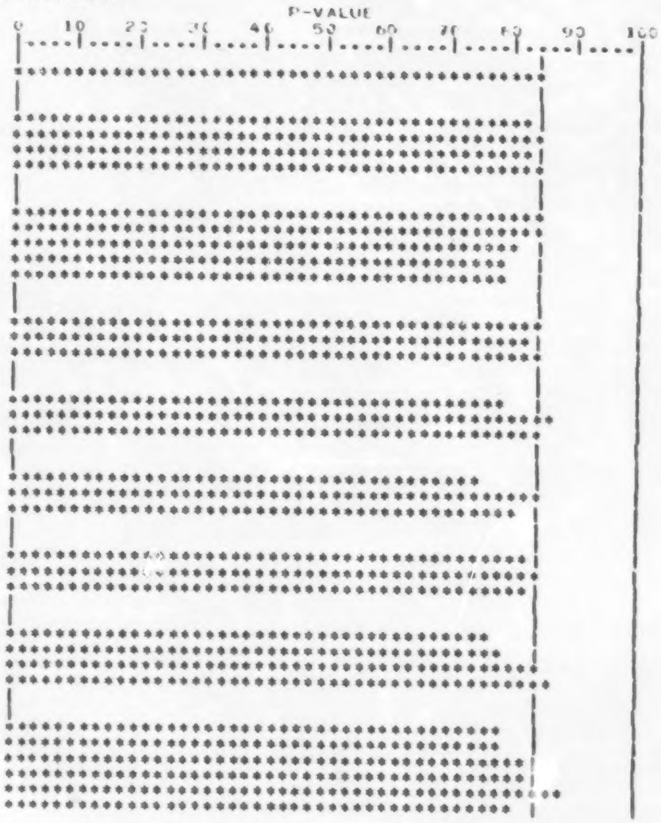


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS SPRING 1978

OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
83.15	0.62			2201	ALL STUDENTS
----HOW MUCH ARE YOUR PARENTS INVOLVED? ----					
82.25	0.93	-0.75	0.63	406	HARDLY AT ALL
83.61	0.65	0.46	0.52	728	ONLY A LITTLE
82.64	1.24	-0.31	0.57	734	QUITE A BIT
83.60	1.28	0.45	0.79	329	A LOT
----FAMILY OCCUPATIONAL STATUS ----					
84.21	0.78	1.06*	0.29	1185	HIGH
83.95	0.66	0.81	0.53	641	MEDIUM
80.01	1.65	-3.14*	1.40	151	LOW
77.03	2.53	-6.11*	2.02	138	UNKNOWN
77.67	2.46	-5.47*	1.96	84	NONE
----DO YOU WANT A JOB LISTED IN QUESTION 18?----					
83.64	1.07	0.49	0.37	1218	YES
81.99	0.80	-1.16	0.61	623	NO
83.34	0.90	0.20	0.74	357	I DON'T KNOW
----DO YOU WANT A JOB LISTED IN QUESTION 20?----					
78.80	1.32	-4.34*	0.66	706	YES
85.49	0.67	2.34*	0.40	1146	NO
84.31	0.73	1.17	0.67	343	I DON'T KNOW
----DO YOU WANT A JOB LISTED IN QUESTION 22?----					
74.35	2.20	-8.80*	1.60	160	YES
84.13	0.74	1.03*	0.20	1838	NO
80.26	1.33	-2.89*	1.01	199	I DON'T KNOW
----HOW SURE ARE YOU ABOUT FUTURE JOB? ----					
82.86	1.02	-0.28	0.54	472	NOT VERY SURE
83.61	0.81	0.46	0.30	948	SOMEWHAT SURE
82.70	0.98	-0.45	0.42	777	VERY SURE
----PARENTS WANT YOU TO GO TO COLLEGE? ----					
76.89	1.46	-6.26*	1.37	179	HARDLY AT ALL
78.97	0.93	-4.18*	0.74	335	ONLY A LITTLE
83.63	0.88	0.49	0.43	764	QUITE A BIT
85.65	0.91	2.50*	0.36	908	A LOT
----WHAT DO YOU PLAN TO DO? ----					
78.13	1.32	-5.01*	0.92	315	FULL-TIME JOB
77.76	1.84	-5.29*	1.42	111	JOB-SCHOOL
81.24	1.71	-1.91	1.17	257	SPECIAL TRAINING
82.35	0.92	-0.80	1.01	211	2-YEAR COLLEGE
88.11	0.49	4.96*	0.55	681	4-YEAR COLLEGE
79.43	1.21	-3.71*	0.77	396	DON'T KNOW



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                NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
              MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

                   OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

           SE OF      GROUP      SE OF    SAMPLE
P-VALUE   P-VALUE    EFFECT     EFFECT     SIZE             REPORTING GROUP

 83.15      0.82                           2201             ALL STUDENTS

----HOW MANY TIMES DISCUSSED WITH COUNSELOR?----
 80.08      1.09     -3.06*      0.56      668              NONE
 84.40      0.79      1.25*      0.48      893              A FEW
 85.75      0.85      2.60*      0.54      582              SEVERAL
 74.83      2.84     -8.32*      2.58       49              DON'T KNOW

----HAVE YOU EVER DONE REGULAR WORK?             ----
 83.75      0.68      0.60*      0.21     2080              YES
 73.74      3.67     -9.41*      3.07      116              NO

----HAVE YOU EVER DONE VOLUNTEER WORK?           ----
 83.93      1.06      0.78       0.49      651              YES
 82.84      0.78     -0.30       0.22     1532              NO

----HAVE YOU EVER PARTICIPATED IN WORK STUDY----
 79.99      1.50     -3.16*      0.95      382              YES
 83.89      0.72      0.75*      0.25     1793              NO

----WHICH BEST DESCRIBES YOUR PROGRAM?           ----
 80.69      1.16     -2.46*      0.97      299              GENERAL
 76.47      1.59     -6.67*      1.33      267              VOCATIONAL
 87.87      0.40      4.72*      0.59     1161              COLLEGE
 78.55      1.85     -4.59*      1.30      290              BUSINESS
 73.85      1.88     -9.29*      1.38      172              DON'T KNOW

----KIND OF COMMUNITY                            ----
 74.39      3.07     -8.76*      2.57      381              BIG CITIES
 80.14      1.92     -3.00       1.82      289              INDUSTRIAL
 86.96      0.39      3.82*      0.82      943              RESIDENTIAL
 83.75      0.81      0.61       1.00      588              OTHER

----REGION OF THE STATE                          ----
 80.19      2.41     -2.96       1.75      563              BOSTON
 84.67      1.16      1.52       1.19      431              NORTHEAST
 86.59      0.64      3.44*      1.02      208              PITTSFIELD
 82.91      1.11     -0.24       1.21      375              SOUTHEAST
 85.06      1.61      1.91       1.67      211              SPRINGFIELD
 84.52      0.68      1.37       0.96      413              WORCESTER
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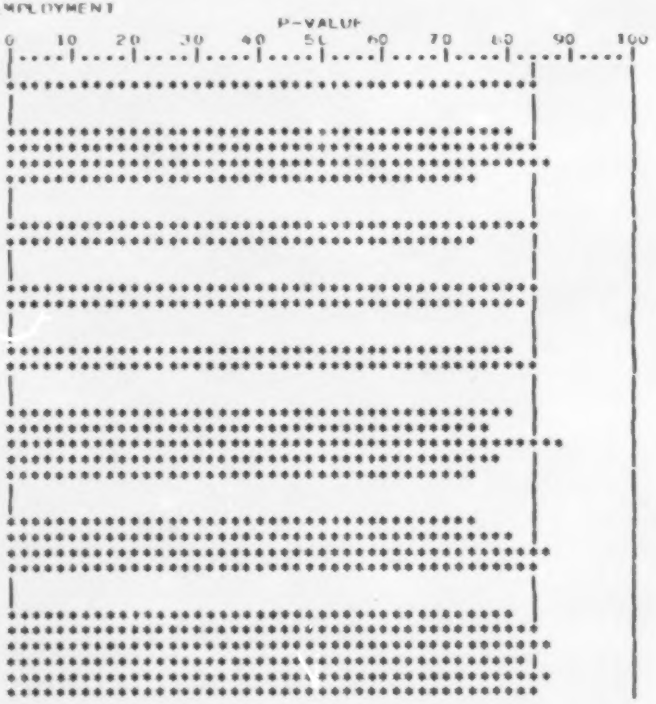
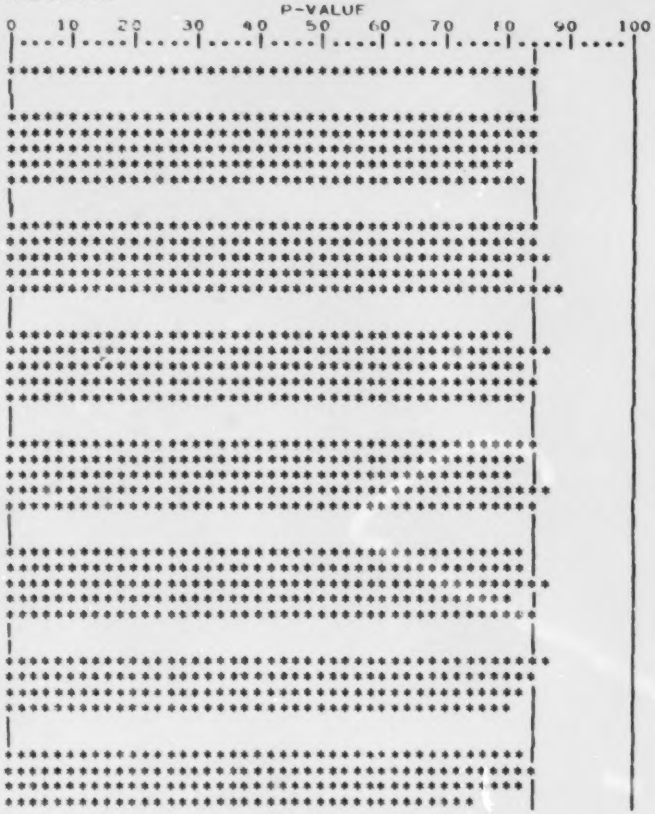


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17-YEAR OLDS SPRING 1978

OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE	REPORTING GROUP
83.15	0.82			2261	ALL STUDENTS
----EMPHASIS ON OBJECTIVE A. ----					
84.24	1.11	1.10	1.23	336	FIRST
83.72	1.77	0.58	1.62	416	SECOND
84.68	1.23	1.54	1.34	314	THIRD
80.79	4.12	-2.36	3.62	298	FOURTH
82.72	1.19	-0.43	1.04	766	FIFTH
----EMPHASIS ON OBJECTIVE B. ----					
83.23	1.34	0.08	1.21	592	FIRST
83.71	1.40	0.56	1.41	386	SECOND
85.12	0.82	1.98	1.05	428	THIRD
80.68	2.22	-2.46	1.65	621	FOURTH
88.30	0.47	5.15*	0.92	101	FIFTH
----EMPHASIS ON OBJECTIVE C. ----					
80.47	2.37	-2.67	2.32	188	FIRST
85.55	0.74	2.40*	1.01	380	SECOND
82.38	1.62	-0.76	1.28	776	THIRD
84.03	1.35	0.88	1.26	541	FOURTH
82.18	2.33	-0.97	2.24	245	FIFTH
----EMPHASIS ON OBJECTIVE D. ----					
84.80	1.20	1.66	1.22	468	FIRST
81.29	2.24	-1.85	1.70	605	SECOND
79.72	2.33	-3.42	2.16	294	THIRD
85.67	1.04	2.53*	1.17	365	FOURTH
84.53	1.06	1.39	1.19	398	FIFTH
----EMPHASIS ON OBJECTIVE E. ----					
82.71	1.33	-0.44	1.23	587	FIRST
82.18	2.36	-0.97	1.86	515	SECOND
85.12	1.72	1.98	1.65	345	THIRD
80.82	1.74	-2.32	1.77	216	FOURTH
84.46	1.33	1.32	1.29	467	FIFTH
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE A. ----					
85.76	0.46	2.61*	0.94	25	VERY SATISFIED
83.79	0.94	0.64	0.82	1088	SATISFIED
82.77	1.54	-0.38	1.04	917	DISSATISFIED
79.81	3.66	-3.33	3.57	100	VERY DISSATISFIE
----ACHIEVEMENT BY STUDENTS ON OBJECTIVE B. ----					
81.91	1.76	-1.24	1.53	132	VERY SATISFIED
84.14	1.00	0.99	0.88	993	SATISFIED
82.86	1.51	-0.28	1.00	946	DISSATISFIED
74.75	4.37	-8.40	4.33	59	VERY DISSATISFIE



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                    NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                  MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17-YEAR OLDS SPRING 1978

                     OBJECTIVE 4. APPLICATION OF BASIC SKILLS IN SEEKING EMPLOYMENT

            SE OF      GROUP      SE OF    SAMPLE
P-VALUE    P-VALUE    EFFECT     EFFECT     SIZE              REPORTING GROUP

 83.15       0.82                           2201              ALL STUDENTS

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE C. ----
 88.00       0.43      4.85*      0.92        25              VERY SATISFIED
 84.00       0.73      0.86       0.82      1121              SATISFIED
 82.42       1.67     -0.73       1.06       910              DISSATISIFED
 78.81       4.57     -4.33       4.47        74              VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE D. ----
 83.34       2.35      0.20       2.32       137              VERY SATISFIED
 83.14       1.15     -0.01       0.64      1322              SATISFIED
 83.09       1.42     -0.05       1.24       629              DISSATISIFED
 84.20       3.64      1.06       3.63        42              VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE F. ----
 88.33       0.47      5.19*      0.91       143              VERY SATISFIED
 82.67       1.24     -0.47       0.71      1198              SATISFIED
 82.71       1.33     -0.44       1.17       687              DISSATISIFED
 84.90       1.94      1.75       2.01        81              VERY DISSATISFIE

----IS YOUR SCHOOL AN ESEA TITLE I SCHOOL?  ----
 81.49       1.23     -1.65       0.97       885              YES
 84.31       1.28      1.17       0.86      1077              NO

----PARENTAL SUPPORT OF YOUR SCHOOL?          ----
 86.12       1.36      2.97*      1.42       271              EXCELLENT
 83.46       1.21      0.32       0.77      1206              GOOD
 81.66       1.83     -1.49       1.63       460              AVERAGE
 82.39       3.96     -0.76       3.81       128              FAIR
 77.29       1.22     -5.85*      1.44        63              POOR

----ATTITUDE OF STUDENTS TOWARD SCHOOL?       ----
 85.45       1.86      2.30       1.86       192              EXCELLENT
 85.19       0.60      2.04*      0.79      1224              GOOD
 80.92       2.34     -2.22       1.84       550              AVERAGE
 73.32       3.40     -9.82*      3.26       139              FAIR
 77.24       0.93     -5.91*      1.23        25              POOR

----ATTENDANCE FIRST QUARTER                  ----
 78.92       2.67     -4.23*      1.51       629              LOW
 84.96       0.68      1.81*      0.81      1207              HIGH

----ATTENDANCE SECOND QUARTER                 ----
 78.95       1.79     -4.20*      1.20       788              LOW
 85.55       0.54      2.40*      0.81      1060              HIGH

----HOW AVAILABLE ARE CAREER ED PROGRAMS?     ----
 83.05       1.08     -0.09       0.55      1450              GENERALLY
 83.19       1.20      0.04       1.24       466              SOMEWHAT
 84.75       3.94      1.60       3.76       130              MINIMALLY
 82.39       4.78     -0.75       4.64        90              NOT AT ALL
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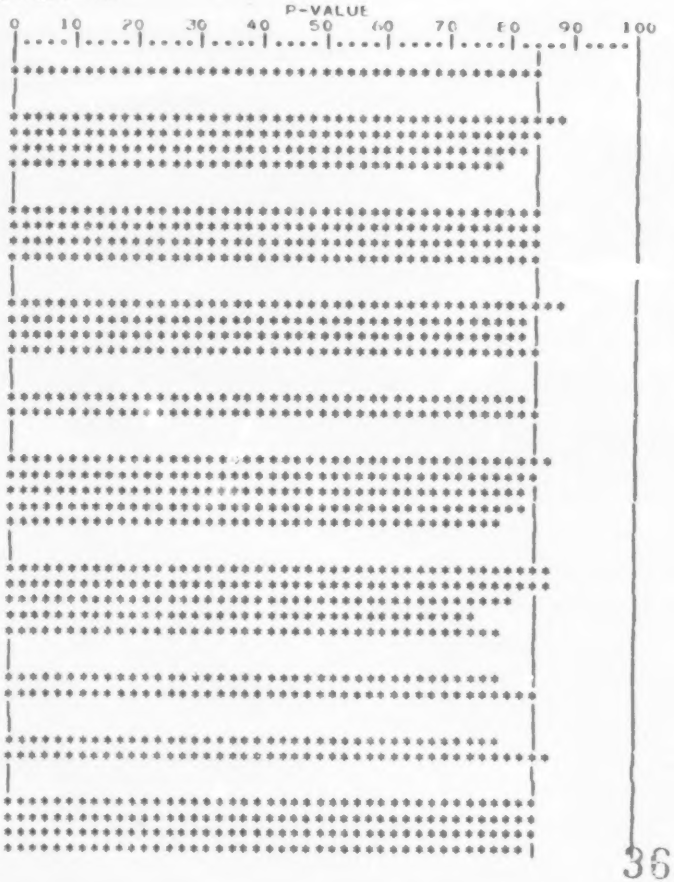
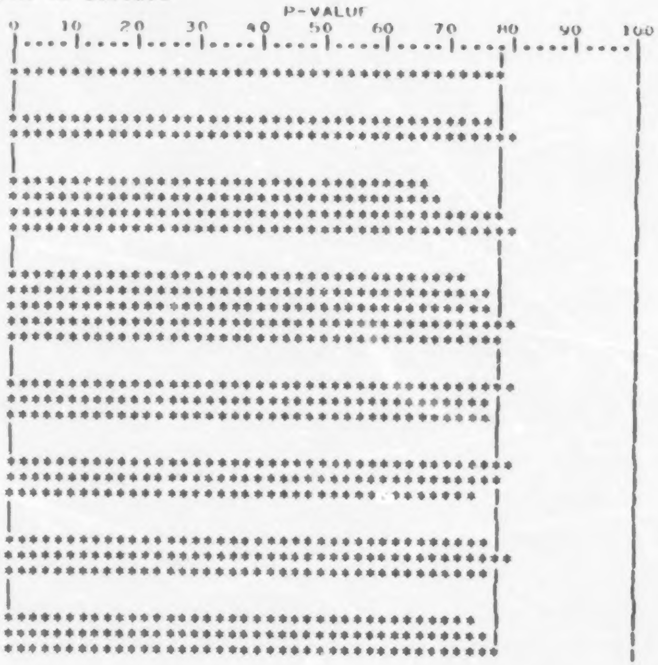


NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS SPRING 1978

OBJECTIVE 5. PERSONAL ATTITUDES AND VALUES CONTRIBUTING TO SUCCESS

P-VALUE	SE OF P-VALUE	GROUP EFFECT	SE OF EFFECT	SAMPLE SIZE		REPORTING GROUP
77.81	0.71			2201		ALL STUDENTS
----SEX OF THE STUDENT					----	
76.01	0.90	-1.80*	0.37	1071		MALE
79.54	0.67	1.73*	0.40	1124		FEMALE
----GRADE OF THE STUDENT					----	
65.65	3.39	-12.16*	3.16	34		9TH GRADE
67.22	2.24	-10.59*	1.74	168		10TH GRADE
78.69	0.57	0.88*	0.33	1421		11TH GRADE
79.62	0.72	1.81*	0.66	575		12TH GRADE
----HOW DO YOU FEEL ABOUT SCHOOL?					----	
72.75	1.46	-5.06*	1.25	131		STRONGLY DISLIKE
76.12	1.11	-1.69	0.89	222		DISLIKE
75.76	0.87	-2.05*	0.42	740		SCHOOL IS OK
80.35	0.71	2.54*	0.31	980		LIKE
78.67	1.78	0.86	1.60	124		STRONGLY LIKE
----HOMEWORK - DRILL WORK					----	
80.27	0.50	2.46*	0.44	1078		DAILY
75.08	1.40	-2.73*	0.84	536		WEEKLY
75.87	0.92	-1.94*	0.62	576		MONTHLY
----HOMEWORK - READING ASSIGNED MATERIAL					----	
80.17	0.64	2.36*	0.39	949		DAILY
77.06	0.90	-0.75	0.39	821		WEEKLY
73.99	0.97	-3.82*	0.64	420		MONTHLY
----HOMEWORK - WRITING ON ASSIGNED TOPICS					----	
75.97	1.46	-1.84	1.44	113		DAILY
80.66	0.64	2.85*	0.45	745		WEEKLY
76.41	0.87	-1.40*	0.30	1331		MONTHLY
----HOMEWORK - WORK ON YOUR OWN					----	
74.19	1.80	-3.62*	1.43	176		DAILY
76.74	1.34	-1.07	0.85	396		WEEKLY
78.46	0.59	0.65*	0.26	1621		MONTHLY



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           NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
         MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

              OBJECTIVE 5. PERSONAL ATTITUDES AND VALUES CONTRIBUTING TO SUCCESS

           SE OF     GROUP     SE OF  SAMPLE
P-VALUE  P-VALUE   EFFECT    EFFECT   SIZE             REPORTING GROUP

 77.61     0.71                       2201             ALL STUDENTS

----TALKED WITH CAREER OR GUIDANCE COUNSELOR----
 78.69     0.64     1.08*     0.29    1345             YES
 76.37     0.93    -1.24*     0.47     828             NO

----TALKED WITH PARENT                          ----
 78.46     0.65     0.65*     0.14    1967             YES
 73.05     1.50    -4.76*     1.13     212             NO

----TLAKED WITH FRIEND                          ----
 78.43     0.66     0.82*     0.18    1870             YES
 74.46     1.16    -3.35*     0.76     301             NO

----TALKED WITH PERSON IN INTERESTING JOB       ----
 78.23     0.88     0.42      0.36    1045             YES
 77.83     0.62     0.02      0.34    1112             NO

----TALKED WITH TEACHER                         ----
 79.25     0.85     1.44*     0.39     810             YES
 77.26     0.69    -0.55      0.29    1350             NO

----DID YOU EVER TAKE A CAREER TEST?            ----
 79.67     0.53     1.86*     0.44    1123             YES
 76.59     1.02    -1.22*     0.49     811             NO
 74.40     1.22    -3.41*     0.86     260             I DON'T KNOW

----ARE FIELD TRIPS USEFUL?                     ----
 78.37     0.64     0.56*     0.17    1887             YES
 75.67     1.35    -2.14*     1.03     213             NO

----SCHOOLING HELPS YOU THINK ABOUT WORK?       ----
 75.74     0.97    -2.07*     0.82     269             NOT VERY USEFUL
 77.74     0.80    -0.07      0.32    1062             SOMEWHAT USEFUL
 78.99     5.95     1.18*     0.48     691             VERY USEFUL
 77.19     1.25    -0.71      1.20     174             I DON'T KNOW
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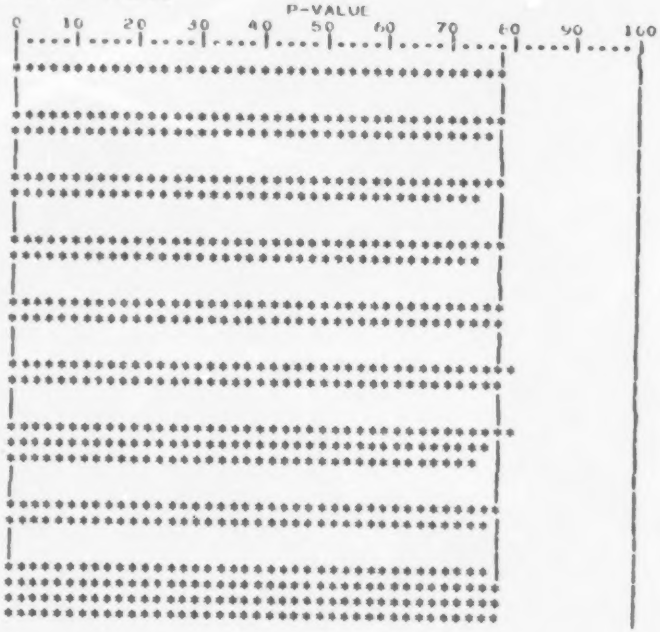

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NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

OBJECTIVE 5. PERSONAL ATTITUDES AND VALUES CONTRIBUTING TO SUCCESS

          SE OF     GROUP     SE OF   SAMPLE
P-VALUE  P-VALUE   EFFECT    EFFECT    SIZE             REPORTING GROUP

 77.81     0.71                        2201             ALL STUDENTS

----HOW MUCH ARE YOUR PARENTS INVOLVED?         ----
 75.76     0.84     -2.05*     0.68     406             HARDLY AT ALL
 78.38     0.63      0.57      0.54     728             ONLY A LITTLE
 77.77     1.17     -0.04      0.59     734             QUITE A BIT
 79.08     1.11      1.27      0.76     329             A LOT

----FAMILY OCCUPATIONAL STATUS                  ----
 78.69     0.70      0.67*     0.29    1185             HIGH
 78.54     0.62      0.73      0.53     641             MEDIUM
 75.35     1.38     -2.46*     1.08     151             LOW
 74.90     1.93     -3.91*     1.55     136             UNKNOWN
 70.68     2.61     -7.13*     2.19      84             NONE

----DO YOU WANT A JOB LISTED IN QUESTION 18?----
 78.74     0.92      0.93*     0.35    1218             YES
 75.49     0.68     -2.32*     0.49     623             NO
 78.57     0.84      0.76      0.73     357             I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 20?----
 73.87     1.17     -3.94*     0.62     706             YES
 79.90     0.61      2.09*     0.35    1146             NO
 79.06     0.64      1.25      0.71     343             I DON'T KNOW

----DO YOU WANT A JOB LISTED IN QUESTION 22?----
 71.49     1.76     -6.32*     1.34     160             YES
 78.51     0.69      0.70*     0.13    1838             NO
 76.14     0.94     -1.67      0.87     199             I DON'T KNOW

----HOW SURE ARE YOU ABOUT FUTURE JOB?          ----
 76.77     0.93     -1.04      0.58     472             NOT VERY SURE
 78.43     0.74      0.62*     0.32     948             SOMEWHAT SURE
 77.65     0.87     -0.16      0.41     777             VERY SURE

----PARENTS WANT YOU TO GO TO COLLEGE?          ----
 72.37     1.10     -5.44*     1.13     179             HARDLY AT ALL
 73.93     0.99     -3.88*     0.71     335             ONLY A LITTLE
 77.90     0.73      0.09      0.42     764             QUITE A BIT
 80.43     0.84      2.59*     0.42     908             A LOT

----WHAT DO YOU PLAN TO DO?                     ----
 73.00     1.09     -4.81*     0.84     315             FULL-TIME JOB
 74.73     1.62     -3.08*     1.25     111             JOB-SCHOOL
 74.16     1.50     -3.65*     1.05     257             SPECIAL TRAINING
 77.46     0.97     -0.35      1.03     211             2-YEAR COLLEGE
 82.77     0.48      4.96*     0.51     881             4-YEAR COLLEGE
 73.92     1.07     -3.89*     0.71     398             DON'T KNOW
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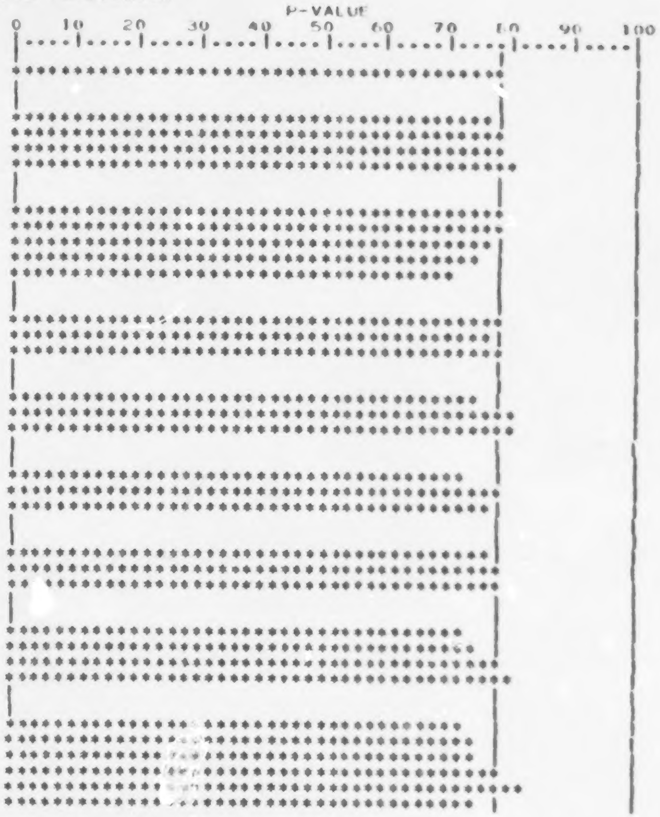

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              NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
            MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17 YEAR OLDS  SPRING 1978

                OBJECTIVE 5. PERSONAL ATTITUDES AND VALUES CONTRIBUTING TO SUCCESS

            SE OF     GROUP     SE OF   SAMPLE
P-VALUE    P-VALUE    EFFECT    EFFECT   SIZE          REPORTING GROUP

 77.81      0.71                         2201          ALL STUDENTS

----HOW MANY TIMES DISCUSSED WITH COUNSELOR?----
 75.31      0.99     -2.50*     0.56      668          NONE
 78.75      0.75      0.94*     0.43      893          A FEW
 79.92      0.84      2.11*     0.51      582          SEVERAL
 70.78      1.74     -7.03*     1.88       49          DON'T KNOW

----HAVE YOU EVER DONE REGULAR WORK?          ----
 78.39      0.61      0.58*     0.18     2080          YES
 68.64      3.00     -9.17*     2.52      116          NO

----HAVE YOU EVER DONE VOLUNTEER WORK?        ----
 78.66      0.99      0.85      0.49      651          YES
 77.40      0.67     -0.41*     0.21     1532          NO

----HAVE YOU EVER PARTICIPATED IN WORK STUDY----
 75.01      1.32     -2.80*     0.85      382          YES
 78.46      0.64      0.65*     0.21     1793          NO

----WHICH BEST DESCRIBES YOUR PROGRAM?        ----
 74.98      1.08     -2.83*     0.93      299          GENERAL
 71.70      1.41     -6.11*     1.17      267          VOCATIONAL
 81.85      0.40      4.04*     0.52     1161          COLLEGE
 74.50      1.60     -3.31*     1.11      290          BUSINESS
 71.58      1.40     -6.23*     1.06      172          DON'T KNOW

----KIND OF COMMUNITY                         ----
 71.78      2.66     -6.03*     2.22      381          BIG CITIES
 74.24      1.48     -3.57*     1.44      289          INDUSTRIAL
 81.50      0.39      3.69*     0.72      943          RESIDENTIAL
 77.07      0.80     -0.74      0.90      588          OTHER

----REGION OF THE STATE                       ----
 75.86      2.05     -1.95      1.48      563          BOSTON
 79.15      1.11      1.34      1.09      431          NORTHEAST
 79.77      0.85      1.96      1.08      208          PITTSFIELD
 77.90      0.80      0.09      0.96      375          SOUTHEAST
 78.22      1.44      0.41      1.48      211          SPRINGFIELD
 78.56      0.92      0.75      1.03      413          WORCESTER
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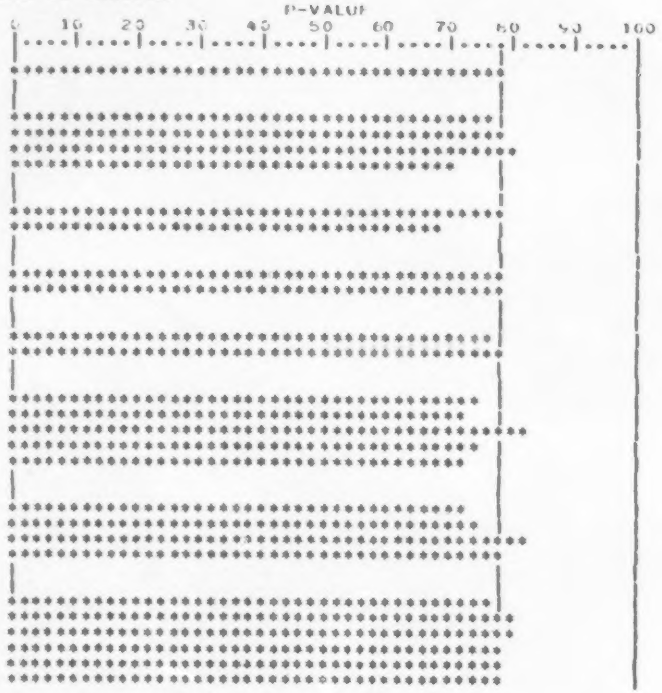

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                    NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
                 MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17-YEAR OLDS SPRING 1978

                     OBJECTIVE 5. PERSONAL ATTITUDES AND VALUES CONTRIBUTING TO SUCCESS

           SE OF      GROUP     SE OF   SAMPLE
P-VALUE   P-VALUE    EFFECT    EFFECT    SIZE               REPORTING GROUP

 77.81      0.71                         2201               ALL STUDENTS

----EMPHASIS ON OBJECTIVE A.                        ----
 78.06      1.16       0.25      1.19     336               FIRST
 78.54      1.28       0.73      1.23     416               SECOND
 79.55      1.18       1.74      1.23     214               THIRD
 75.77      3.72      -2.04      3.26     298               FOURTH
 77.48      0.96      -0.33      0.87     766               FIFTH

----EMPHASIS ON OBJECTIVE B.                        ----
 78.66      1.10       0.85      1.01     592               FIRST
 78.47      1.23       0.66      1.23     388               SECOND
 77.96      0.88       0.15      0.98     428               THIRD
 75.87      1.88      -1.94      1.40     621               FOURTH
 82.75      0.96       4.94*     1.16     101               FIFTH

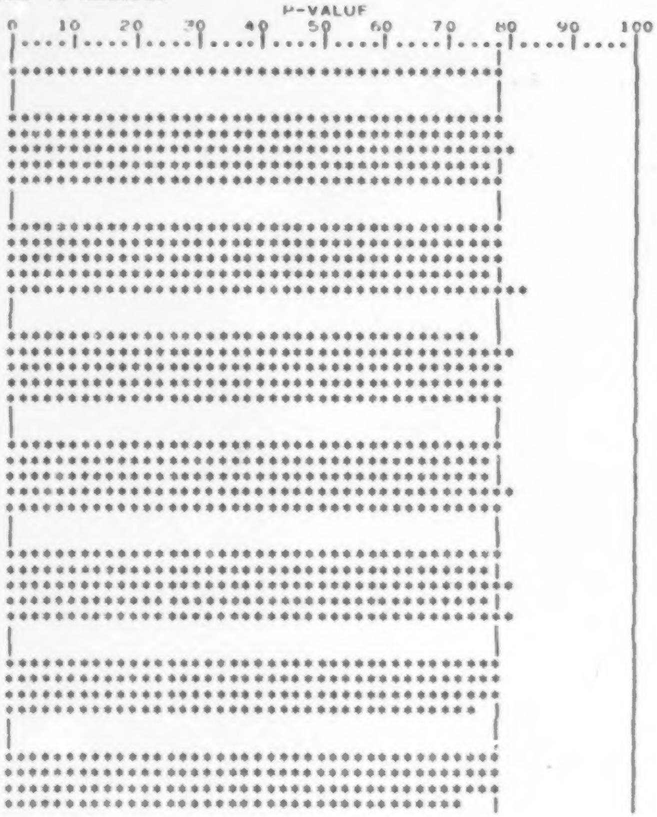
----EMPHASIS ON OBJECTIVE C.                        ----
 74.32      2.16      -3.49      2.09     188               FIRST
 79.34      0.67       1.53      0.89     380               SECOND
 77.77      1.63      -0.04      1.13     776               THIRD
 78.03      1.06       0.22      1.02     541               FOURTH
 78.19      1.60       0.38      1.59     245               FIFTH

----EMPHASIS ON OBJECTIVE D.                        ----
 78.59      1.10       0.78      1.08     468               FIRST
 76.43      1.96      -1.38      1.48     605               SECOND
 75.68      1.68      -2.13      1.60     294               THIRD
 80.48      1.07       2.67*     1.11     365               FOURTH
 78.42      0.92       0.61      1.02     398               FIFTH

----EMPHASIS ON OBJECTIVE E.                        ----
 77.04      1.16      -0.77      1.06     587               FIRST
 76.71      2.12      -1.10      1.65     515               SECOND
 79.72      1.14       1.91      1.18     245               THIRD
 76.72      1.32      -1.09      1.38     216               FOURTH
 79.25      1.02       1.44      1.04     467               FIFTH

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE A. ----
 77.28      0.72      -0.53      1.01      25               VERY SATISFIED
 78.54      0.75       0.73      0.71    1088               SATISFIED
 77.33      1.38      -0.48      0.90     917               DISSATISIFED
 74.85      2.62      -2.96      2.59     100               VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE B. ----
 77.36      1.56      -0.45      1.61     132               VERY SATISFIED
 78.81      0.78       1.00      0.74     993               SATISFIED
 77.31      1.34      -0.50      0.86     946               DISSATISIFED
 71.15      3.20      -6.66*     3.19      59               VERY DISSATISFIE
```



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           NATIONAL EVALUATION SYSTEMS, INC. -- CONTENT ANALYSIS BY REPORTING GROUPS
         MASSACHUSETTS STATEWIDE EDUCATIONAL ASSESSMENT COD 17-YEAR OLDS SPRING 1978

            OBJECTIVE 5. PERSONAL ATTITUDES AND VALUES CONTRIBUTING TO SUCCESS

           SE OF     GROUP     SE OF   SAMPLE
P-VALUE  P-VALUE    EFFECT    EFFECT    SIZE          REPORTING GROUP

 77.81     0.71                         2201          ALL STUDENTS

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE C. ----
 84.52     0.52      6.71*     0.67       25          VERY SATISFIED
 78.50     0.64      0.69      0.70     1121          SATISFIED
 77.31     1.43     -0.50      0.91      910          DISSATISIFED
 72.78     2.87     -5.03      2.86       74          VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE D. ----
 76.60     2.19     -1.20      2.15      137          VERY SATISFIED
 77.75     1.00     -0.06      0.55     1222          SATISFIED
 78.24     1.12      0.43      1.02      629          DISSATISIFED
 78.33     3.43      0.52      4.41       42          VERY DISSATISFIE

----ACHIEVEMENT BY STUDENTS ON OBJECTIVE E. ----
 82.49     0.85      4.68*     1.05      143          VERY SATISFIED
 77.20     1.07     -0.51      0.60     1198          SATISFIED
 78.14     1.07      0.33      0.97      657          DISSATISIFED
 77.85     1.97      0.04      2.01       81          VERY DISSATISFIE

----IS YOUR SCHOOL AN ESEA TITLE I SCHOOL?   ----
 76.49     0.91     -1.32      0.60      865          YES
 78.80     1.19      0.99      0.74     1077          NO

----PARENTAL SUPPORT OF YOUR SCHOOL?          ----
 79.47     1.55      1.66      1.50      271          EXCELLENT
 78.[illegible]     1.09      0.25      0.66     1208          GOOD
 77.5[illegible]     1.24     -0.26      1.10      460          AVERAGE
 76.84     2.47     -0.97      2.43      128          FAIR
 71.01     2.14     -6.80*     2.17       63          POOR

----ATTITUDE OF STUDENTS TOWARD SCHOOL?       ----
 79.35     1.88      1.54      1.85      192          EXCELLENT
 79.40     0.55      1.59*     0.68     1224          GOOD
 76.26     2.06     -1.55      1.61      550          AVERAGE
 71.02     2.16     -6.79*     2.07      135          FAIR
 67.88     1.07     -9.93*     1.27       25          POOR

----ATTENDANCE FIRST QUARTER                  ----
 74.55     1.70     -3.26*     1.24      629          LOW
 79.09     0.69      1.28      0.68     1207          HIGH

----ATTENDANCE SECOND QUARTER                 ----
 74.96     1.51     -2.85*     1.62      788          LOW
 79.19     0.64      1.38*     0.70     1060          HIGH

----HOW AVAILABLE ARE CAREER ED PROGRAMS?     ----
 77.46     0.97     -0.35      0.45     1450          GENERALLY
 79.12     0.86      1.31      0.97      460          SOMEWHAT
 78.19     2.83      0.38      2.73      120          MINIMALLY
 77.11     3.05     -0.70      3.60       96          NOT AT ALL
```

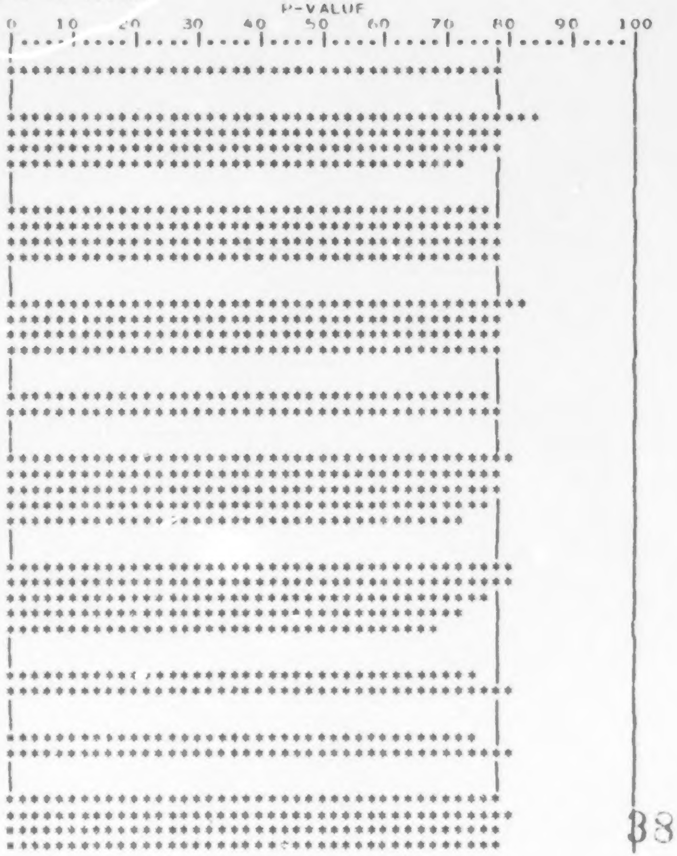

APPENDIX H

Scoring Criteria for Open-Ended Items

Massachusetts Statewide Educational Assessment 1977-78

CODING INSTRUCTIONS FOR TEST IN CAREER AND OCCUPATIONAL DEVELOPMENT

Twelve of the test questions on the COD test were "open-ended," rather than multiple-choice items. On these items the student had to write in the correct answer. On the following pages are the guidelines used by NES to score those items, and a key to the code used for each type of response.

The guidelines used for scoring were developed for use in the National Assessment of Educational Progress (NAEP). By using the same guidelines, we have assured that the Massachusetts results are comparable to those of NAEP.

The next two pages contain the code numbers for each type of response. For example, on item #4, a score of 3 was given a student who made only 3 acceptable responses to the question. The mastery criterion indicated for item #4 in Appendix A is 5, which means that the student had to write 5 acceptable answers to be given credit for the question.

Examples of acceptable and unacceptable responses appear on the remaining pages of this appendix.

ITEM NUMBER	NES CODE	RESPONSE
4	ƀ → "blank"	No response
	1	One correct response
	2	Two correct responses
	3	Three correct responses
	4	Four correct responses
	5	Five correct responses
5	ƀ	No response
	1	Machinist, metal engineer, etc.
	2	Incorrect response
6	ƀ	No response
	1	Architect, etc.
	2	Incorrect response
7	ƀ	No response
	1	Bank teller, cashier, etc.
	2	Incorrect response
26	ƀ	No response
	1	One correct response
	2	Two correct responses
	3	Three or more correct responses
78	ƀ	No response
	1	58, 59, 60, 61, or 62
	2	Incorrect response
79	ƀ	No response
	1	88, 89, 90, 91, or 92
	2	Incorrect response
80	ƀ	No response
	1	73, 74, 75, 76, or 77
	2	Incorrect response

ITEM NUMBER	NES CODE	RESPONSE
81	b̸	No response
	1	10 or 14 - 4
	2	Incorrect response (for example, 4)
82	b̸	No response
	1	12 or 28 - 16
	2	Incorrect response (for example, 16)
83	b̸	No response
	1	120, 12 x 10, 12 by 10, (12) (10) *OR* if student correctly multiplies his answers to 81 and 82 (for example,64)
	2	Incorrect response
89		Each of the six components of the envelope are scored either correct or incorrect. The six components are the three lines for the return address, and the three lines for the address.
	b̸	No response or all incorrect
	1	One component correct
	2	Two components correct
	3	Three components correct
	4	Four components correct
	5	Five components correct
	6	All six components correct

QUESTION 4 — ACCEPTABLE RESPONSES

RESPONSIBILITY, CHALLENGE, USEFULNESS, SELF-IMPROVEMENT

How he can help in a certain field
He should know how hard the work would be
If when he retires he can say he contributed some knowledge or skill
See if the work is easy
Think if it's too hard or easy
If the job can help people in any way
Will it help other people
A job that could be increasing your knowledge of the job
Something without pressure
What benefit to others is it
They should know if the job is easy
How hard is the work?
Is it an intellectual challenge
Does the job make use of your natural talents and abilities
Will you continue to learn while in the job

PERSONAL SATISFACTION, INTEREST, DESIRES OR GOALS

What kind of work he likes
How well you like the job
What he likes to do best
What he will get satisfaction from
What he would enjoy doing
He should make sure he will find the particular career rewarding
Anybody should think about if he wants to be one or not
Do you like the kind of work you want to do
What kind of work you're interested in
What he is interested in
If a person enjoys the job
What do you like. You should have an interest in what you're doing in later life
Is this what he wants to do in the future?
Is he going to stay with the job long
His or her happiness
His or her preference
Is it what you want to do
"One's interests"
The satisfaction one will receive in doing the job well
Choose something you like
Will he actually like the job being sought
It should be a job that you are interested in
Is the area of interest to you
Enjoyment of job

PRESTIGE, STATUS, OPPORTUNITY FOR ADVANCEMENT, RESPECTABILITY

Will I ever be moved up from the position I'm in
If it will give him experience so he can get a different job
What he can do for himself with a particular job
The future he is going to have if he works there
When he will be able to get a raise or promotion or both
Other people's opinion
Is there room to move up
Is the job or career one that you think you can make it to the top
Future if any in the field, chances for advancement
What other fields of work it could lead to
Whether or not the company is growing
Chance for improvement
Is there any room for bettering yourself
Advancement potential
The prospect of promotion in jobs
How fast can he expect advancement
Naturally, is their a chance for advancement after so many years.
Can you better yourself later.
Is there room for advancement

AVAILABILITY (PRESENT AND FUTURE) OF THE JOB

Find out if there is any competition
It should be something that offers a future
Are there enough jobs of that kind
How long will it last
How long does he think he'll stay there
How many openings are there in that particular field
Future
Security
If they're needed to do this type of job
Is the job stable
Any chance of getting laid off
Regular work
Stability
Stability of the company
Possible length of job before automation
Will there continue to be a need for individuals trained in the area of interest
Whether there is job security

DUTIES

Find out a little about what they do
Type of work
What kind of job
What do you do
Do I have to boss people
What you have to work on
What work you have to do
He should know just how much work he will have to do
He should know exactly what his function would be when working
The things you will be doing
What kind of work he wants to do
They should know what kind of work they are going to do
All that job entails
Type of work he'll be doing
Type of job

WORKING CONDITIONS, MECHANICAL ASPECTS OF JOB

Money
How much they pay an hour
How many days he has to work
How many days he gets off
Which holidays he gets
When will they start their job
What time will they go in
What time will they get off
How much money the job will pay
If he gets paid for holidays
If he gets paid for vacation
The way you're going to get to work
How much it is going to take for gas
If you can get what shift you want
How much money you need to make a living
How many hours you want to work each day
How many hours he has to work
Will I be home often
Will I have to work over time
Is it near you
Is it dangerous
Will it pay for hospital payments - insurance
Will it pay for benefits
Will it buy gas to get there
How often do you get paid
How much money does he want to get paid
The hours you work
How much money an hour
Your benefits
Lunch break
Location, he might have to move
What hours he's working, it might affect his family
Working conditions
How much of his time does he want to give to doing a job
Time for breaks
Potential salary
Working conditions
Fringe benefits
Location
The amount of time required in a job
Full time work
Insurance
Working conditions, such as in a plant in bad acid fumes
Type of equipment for his use
The financial aspect of this career would it be a good living, dollar-wise?
Does it offer activities or programs for other members of his family

QUESTION 4 — ACCEPTABLE RESPONSES (continued)

JOB QUALIFICATIONS (TRAINING, EXPERIENCE, EDUCATION)

- If they will pass the test
- Do you need training
- Do you have to have a diploma
- How long he has been in school
- He should know how difficult the job is so he will have the skills he should have
- If they have to go to college
- If he has enough education to go into the field
- What he/she has been trained to do
- Previous jobs
- He should know what he is required to know
- If he has the training for the job
- How much schooling he or she has had
- How much training will he need
- Training that you have had for the job
- How much education you'd need and if you could cope with it
- Your requirements
- The amount of schooling required
- Schooling necessary
- Can he meet the educational requirements
- Is the job consistent with your training and experience
- Opportunity for education for job

PERSONAL ABILITIES OR CONSTRAINTS (INTELLIGENCE, PERSONALITY, PHYSICAL ABILITIES)

- His health
- Whether or not he can do the job
- How well you can do what you want to do
- If it is hard work and tires easily doing it
- Will he or she do this job well?
- If they think they can do it
- Be able to work hard
- What job you are best suited for
- What his particular talent or aptitude is
- Can they stick with it or not
- If you are smart enough
- Is it too much for you to do (takes all your time to do good job)
- What can you do well, you should pick a job that isn't too difficult nor too easy
- One's capability to do the work
- Does he like to work
- If he thinks he can do the job
- Does he really have the time to put forth the effort
- One's talents
- Choose something you're good at
- Should be considered whether the person has the ability to stay with the career
- If you can stand the type of labor - physical and mental
- Does the person have the mental capability
- Whether he will or won't be able to handle the job

INTERPERSONAL RELATIONS

- How well you like the people
- Will he or she get along good with other workers?
- Who they will be working with
- How do I act in front of other people
- What your boss man is like
- What the people are like
- The management
- How will he get along with the boss and other employees
- Who you work with
- Someplace where they treat you good
- Is it an opportunity to meet people you enjoy being with
- What kind of people they want to meet
- People he will be working under
- Attitudes of others that one must work with
- Co-workers
- Supervisors - ability to work with them
- Nice people to work with
- Type of people he will associate with
- Talented staff with which to work
- Association with others

POSSIBLE DISCRIMINATORY FACTORS

- Age limits
- He should think about how old he is
- Will I be hired even though I am a different sex, race, or religion
- Whether or not the people accept your race
- Age
- Religious convictions
- Is it open to all minorities?
- Whether the company is an equal opportunity employer

ETHICAL CONSIDERATIONS

- The legality of the job
- Does it produce products that go to war
- Is it a job that fits his ethics
- Will it hurt somebody else needlessly when you could do something else
- If its legal
- Does your job help or hurt other people
- Will his job contract be truthful in things like raises every 3 months 2 week vacations etc.
- Does hurt other people
- Does the work conflict with her principles or values
- The job on the level
- Reputation of company you have intention to work for
- Is there something that won't cause damage by polluting the land air or water
- Is the work honest

OTHER ACCEPTABLE RESPONSES

- If you have a child at home
- If his wife wants him to have the job
- He has to think of his family
- Do you have a babysitter
- If you're going to school, will it interfere with studies
- What other jobs are available
- What kind of reputation does the place have
- The job's effect on your life!
- Marital status (possible)
- If you are planning a family soon
- If it interferes with other activities
- If it keeps you apart from your family
- Family feelings
- Marital status
- Military status
- Will the job interfere with his home life or outside interests
- Compatible with outside influences, i.e., family life or religious life

UNACCEPTABLE RESPONSES

OTHER UNACCEPTABLE RESPONSES

- If they will break out in a rash or not
- Dressed properly
- Type job
- Think if it's good enough to have
- Will I need workers
- The kind of equipment
- Put money in the bank
- Do I get in trouble
- Can I fight
- Supplies
- To be relied on
- If he will get in fights
- What are you going to do with the money
- The contract of the company
- If your family owns it
- Advantages
- Disadvantages
- Is your boss cute
- Cost
- Freedom on job
- How is he going to get the job
- Why he chooses the job
- If you have connections
- If the job is good or not
- If the work is good
- The family

EXACT DUPLICATE OF A PREVIOUS RESPONSE

MISINTERPRETS QUESTION

- Have a good education
- Be well mannered
- Be patient
- Have good eyes
- Good background
- Must be willing to work hard
- Be a mechanic
- Be an actor
- Work in a store
- Man machines
- Play baseball
- He should think about what he wants to do
- Talk it over with someone
- Get others opinions even is he disagrees with them
- How to talk to the people. Don't be very generous
- No samples given

I DON'T KNOW

GARBAGE

- Huv
- To be able to
- Chamelin
- Possiger
- No samples given
- No samples given

Q #	ACCEPTABLE	UNACCEPTABLE
5	ACCEPTABLE RESPONSES Machinist Metal engineer Metal machinist General machinist Journeyman machinist Precision machinist	UNACCEPTABLE RESPONSES Automobile worker Carpenter Scientist TV repairman Mechanical engineer Steelworker Mechanical welder Architect Draftsman Contractor Blacksmith Factory worker Body repairman Plumber Factory maintenance Machine repairmen Metal part maker Machine tool operator Lathe operator Machine layout man Tool and die maker Tool designer Mechanic
6	ACCEPTABLE RESPONSES Architect Architectural contractor Architectural engineer Architectural designer	UNACCEPTABLE RESPONSES Engineer Contractor Real estate agent Interior decorator Clothes designer Counselor Accountant Draftsman Scientist A model woman Manager of a factory She's a person who gives orders on how to build the building Secretary for a architect Carpenter helper Tax assessor Lawyer Builder or decorator of buildings Building management Designer
7	ACCEPTABLE RESPONSES Bank teller Teller Window operator at a bank Bank clerk Cashier Cashier in bank General teller	UNACCEPTABLE RESPONSES Counter lady Secretary Record keeper Airline hostess Check out lady Bank Clerk Salesman Member of the Mafia Bank Depositor Bookkeeper Checker Record keeper Banker Bank attendant Bank manager Works in a bank Banking secretary Bank checker Bank collector Banker woman

QUESTION 26 — ACCEPTABLE RESPONSES

COUNSELOR; ADVISOR; GUIDANCE OFFICE

Go to the Guidance office. They have books on careers
Ask the guidance counselor about that job
See your guidance counselor
Go to the job resource center in our school learning center
Could go to your counselor and ask him for advice on the job
Visit the career center in school
Get information from the guidance office
Talk to the counselor
Talk to a student advisor
Talk to a job counselor

TALK TO OR OBSERVE PEOPLE IN THE FIELD. (ANY MENTION OF SPECIFIC OCCUPATION EXCEPT THESE CATEGORIES)

Go there to see what it's like
Ask people that work there
If you know a person in a business talk to him or her
Notice how well people enjoy the job you are interested in
Go to the office, factory or mill and see the job being performed
I would go to a person that does that kind of work and get information
Go ask a member to the union and get information
Talk to people who have had this training
Talk to various people employed in that field
Visit a place where your interest is and talk to people there
Talk to people who have been associated with the job
Visit the place to see how things are done and if you are capable of doing it

OBTAIN AND/OR READ MATERIAL ABOUT IT

Look it up in the encyclopedia
Get brochures or some information on this job
Look in that job manual
Read up on the literature of the job
Go to the library for information on length of training, pay, etc.
Send away for booklets about it
Check the business financial record and other background by using that new job information center
Read materials, pamphlets, brochures etc. on the job
Read, in a library for example, material concerning your job interest
Research in the library
Research other jobs for the sake of comparison
Go to the resource center

GET INFORMATION FROM SCHOOL OR COLLEGE, OR FROM PROFESSIONAL ASSOCIATIONS

Send to library associations
Write away to the college that has nursing
Write a letter to the colleges of that area
Check a college catalog
Check with the colleges in the area and have them send pamphlets
Write to "Careers" in Washington
Write to a university or technical school your job may pertain to

TALK TO SCHOOLTEACHER (NOT IN SPECIFIC FIELD)

Ask a teacher
Inquire from your teachers, and see what they think of that particular job
Talk to my teacher
Talk to teachers and find out how they feel about it

CONTACT PERSONNEL OFFICES, EMPLOYER OR EMPLOYMENT OFFICE

Write a letter to the manager of the agency or factory, etc.
Go to place interested in, and ask your questions
Go to the manager and ask him some of the trainings you will have to go through
I could go to the building and ask the manager about the pay and skills
Write to the company and ask them about it
Talk to the manager about the job
Go to the unemployment office and ask
Talk to the person in charge

OTHER ACCEPTABLE RESPONSES

Ask the parents if they know anything about the job
Join a club such as FFA
Ask a friend or associate if they know anything about it
From the better business bureau
Watch films on it
Write for information
Call the Better Business Bureau to find out about their credits
Ask the work experience office if they know anything about it
Speak to an adult, such as your parents
Talk to competing companies

UNACCEPTABLE RESPONSES

GARBAGE

And
Talk so
To know the job
No samples given

OTHER UNACCEPTABLE RESPONSES

High school finish
Stay fast
Look around and see
From a friend
Show you what the job is all about
Ask around the community about the job
Talk to another person
Nothing

GET JOB OR TRAINING

Try to get work there and see how you like it
Try it yourself
Third I would practice on the job to see how it work
Study so you can do it well
Go to a trade school
Working with a carpenter
Go to college
Take lessons
Take a class on it

MISINTERPRETS QUESTION

I find out where it is
Find out what hours you are to go to work and come home
How much money you would get
Ask when you start
What days you have off (like holidays)
If a bus goes there that you can take or if you have transportation
What are the time schedules
What are the rules you will have to follow in order to be safe while working
What time you get off
How many hours you would work
How many days a week
Benefits
Know how the place is run

EXACT DUPLICATE OF A PREVIOUS RESPONSE

I DON'T KNOW

QUESTION 89

Part	Acceptable Responses	Unacceptable Responses
RETURN NAME	Dale Roberts (plus Mr., Dr., etc.) D. Roberts D. R. Dale Allen Roberts Name not in exercise	John Way Wrong place on envelope
RETURN ADDRESS	1545 Lake St. 1545 Lake Blvd. 1545 Lake Lake St. Careless error on 1545 Address not in exercise	345 Moose Wrong place
RETURN CITY	Narka, Kansas 66960 (Ka. or Kan. is OK) (City and state may be on different lines) Narka, Kansas Narka, Kansas 66096 (etc.) 66960 (zip only is OK) City, state and zip not in exercize	Nome, Alaska 99762 Wrong place
NAME	John Way (plus Mr., Dr., etc.) J. Way, John M. Way John Wayne Name not in exercise	Dale Roberts Wrong place
ADDRESS	345 Moose (St., Ave.) Moose St. Careless error on 345 Address not in exercise	1545 Lake St. Wrong Place
CITY, STATE, ZIP	Nome Alaska 99762 (Ak. is OK) (City and state may be on different lines) Partial information, but letter could be sent: 99762 only Nome, Alaska Nome, Alaska 99772 City, state and zip not in exercise	Narka, Kansas 66960 Wrong place

ACKNOWLEDGMENTS

STATEWIDE ASSESSMENT ADVISORY COMMITTEE

Fred Andelman	Massachusetts Teachers Association
Eugene Applebaum	Worcester Public Schools
Aida Burns	Southeast Regional Education Council
Louis Cedrone	Massachusetts Association for Supervision and Curriculum Development
Robert Cormier	Massachusetts Association of School Committees
Diane Coulopoulos	Massachusetts Advisory Council for Bilingual Education
Ronald Edmonds	Massachusetts Advocacy Center
William Fisher (Chairperson)	Massachusetts Association of School Superintendents
Louis Gleason	Association of Vocational School Administrators
Janice Green	Massachusetts Board of Higher Education
Jeffrey Hunt	Massachusetts Student Advisory Council
Bedros Kamitian	Massachusetts Association of Secondary School Principals
Nancy Kienzler	Springfield Regional Education Council
Loretta Kittredge	Parents, Teachers and Students Association
Gregory Konstantakos	Springfield Public Schools
Thomas Lafionatis	Association of Vocational School Administrators
Arigo Latanzi	Greater Boston Regional Education Council
Herve Lemaire	Massachusetts Association of Junior High School Principals
Fritz Lindquist	American Federation of Teachers
James Major	Massachusetts Office of Children
Mary McGaurvan	Northeast Regional Education Council
Louis Perullo	Boston Public Schools
Joseph Plouffe	Special Education Advisory Committee
Roger Richards	Pittsfield Regional Education Council
Marguerite Tibbert	Title I Parent Advisory Council
Corridon Trask	Central Massachusetts Regional Education Council
James Tynan	Massachusetts Association of Elementary School Principals
Susan Wiltshire	League of Women Voters

ACKNOWLEDGMENTS (continued)

INTERPRETIVE AND TECHNICAL PANEL

Robert Borden	Massachusetts Council for Vocational Technical Education
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William Donovan	Kennedy Junior High School, Natick
James Gazzaniga	Mt. Greylock Regional High School
Charles Glenn	Bureau of Equal Educational Opportunity
Edwin Gooding	Federal Reserve Bank of Boston
James Hamilton	Division of Occupational Education
Paul Hayes	Boston Public Schools
Catherine Hopkins	Worcester Public Schools
Robert Manning	Brockton High School
John McIntosh	Division of Occupational Education
John Nevins	Westfield State College
Paul O'Leary	Southeastern Regional Vocational Technical School
Lawrence Ovian	Fitchburg State College
Gerald Paist	Pathfinder Vocational Technical School
Ann Quinn	Worcester Public Schools
Manuel Rainha	Northeast Metropolitan Vocational School
Carmalita Scott	Pittsfield Public Schools
Norman Smith	Northampton High School
Sidney Snegg	Springfield Public Schools
J. Michael Ward	Salem High School
Albert Williamson	Massachusetts School Counselors Association

BENCHMARK PANEL

Peter Finn	Winthrop Public Schools
William Hynes	Worcester Public Schools
Thomas King	Assabet Valley Vocational School
William Leach	Randall School, Auburn
Gus Luparelli	Framingham Public Schools
Shirley McLean	Division of Occupational Education
Ray Parrott	Massachusetts Advisory Council for Vocational Technical Education
Gil Richter	General Electric Company, Lynn
Juan Rodriquez	Bureau of Transitional Bilingual Education
Richard Shurtleff	East Longmeadow Public Schools
Robert Watson	Bureau of Curriculum Services